United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Maryland Agricultural Experiment Station (University of Maryland), Maryland Department of Agriculture, Howard County Board of Commissioners, and Howard County Soil Conservation District

Soil Survey of Howard County, Maryland

How To Use This Soil Survey

General Soil Map

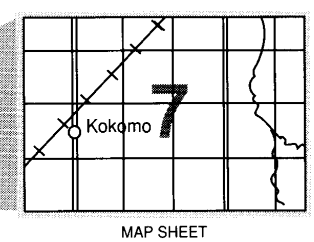
The general soil map, which is a color map, shows the survey area divided into groups of associated soils called general soil map units. This map is useful in planning the use and management of large areas.

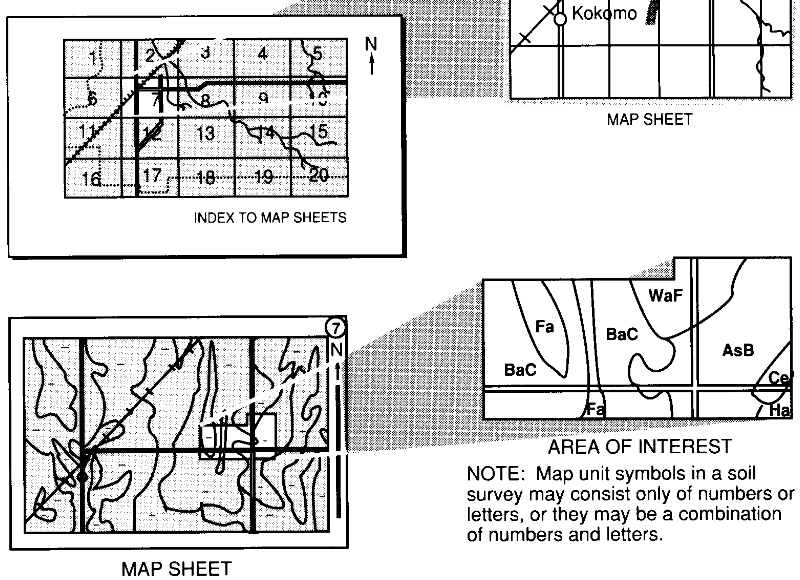
To find information about your area of interest, locate that area on the map, identify the name of the map unit in the area on the color-coded map legend, then refer to the section **General Soil Map Units** for a general description of the soils in your area.

Detailed Soil Maps

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.





Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 2001. Soil names and descriptions were approved in 2003. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2003. The most current official data are available at http://websoilsurvey.nrcs.usda.gov/app/. This survey was made cooperatively by the Natural Resources Conservation Service, the Maryland Agricultural Experiment Station (University of Maryland), the Maryland Department of Agriculture, the Howard County Board of Commissioners, and the Howard County Soil Conservation District. The survey is part of the technical assistance furnished to the Howard County Soil Conservation District.

Cover: Top left—Typical view of the Patapsco River valley along the Howard and Baltimore County line. This area provides opportunities for a variety of recreational activities, including fishing, hiking, and biking. Codorus and Hatboro soils are on the flood plain along the river, and Manor, Bannertown, Legore, and Relay soils are on the adjacent uplands. Top right—One of the many parks near Columbia, Maryland, that provides recreational opportunities for the rapidly developing community. Bottom—Typical land use change from agriculture to a mixture of horse farms and suburban development. Many areas of prime farmland are taken out of production each year because of urban sprawl from Baltimore and Washington, D.C.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

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Issued May 2008

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Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

This soil survey is designed for many different users. Farmers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Jon Hall
State Conservationist
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Soil Survey of Howard County, Maryland

By Joseph Kraft, Natural Resources Conservation Service

Fieldwork by Jared Beard, Valerie Cohen, Joseph Kraft, and Andy K. Piri, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with
the Maryland Agricultural Experiment Station (University of Maryland), the Maryland Department of Agriculture, the Howard County Board of Commissioners, and the Howard County Soil Conservation District

Howard County is in the central part of Maryland (fig. 1). It encompasses 162,100 acres, or 253 square miles, making it the second smallest county in the State. It is bordered by the Patapsco River to the north, the Patuxent River to the south, and Deep Run to the east. The counties adjacent to Howard County are Frederick County to the northwest, Carroll County to the north, Baltimore County to the northeast, and Montgomery, Prince Georges, and Anne Arundel Counties to the south. Ellicott City, the county seat, is about 10 miles from Baltimore and 30 miles from Washington, D.C.

General Nature of the County

This section provides general information about the survey area. It describes history and development, industry and transportation, water supply, geology and associated soils, agriculture, mineral resources, and climate.

History and Development

Howard County was named after John Eager Howard, who served as an officer in the American Revolutionary War and later as the Governor of Maryland. Originally part of Anne Arundel County, the area was included as part of Baltimore County

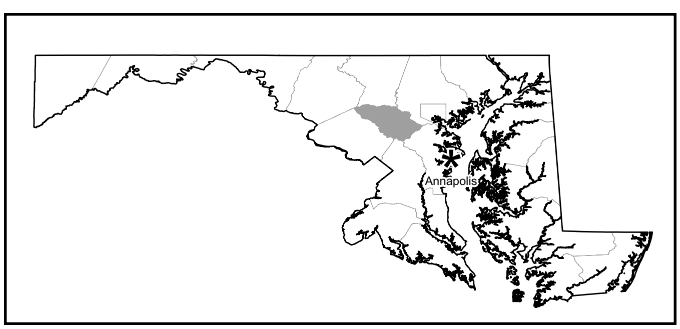

Figure 1.—Location of Howard County in Maryland.

from 1698 to 1727, when it once again became part of Anne Arundel County. It was established as an independent jurisdiction in 1851.

The Elkridge Landing was originally established as a port of entry along the Patapsco River in the early 1700s. It was one of the earliest establishments of Upper Anne Arundel, the area later named Howard County. This landing soon rivaled Annapolis as a seaport due to its proximity to well established estates in Baltimore and Anne Arundel Counties, as well as to the settlers that lived west of Elkridge. In 1774, a tobacco warehouse was established at the landing, at which more than half of the tobacco grown in Anne Arundel County was inspected. Primary exports to England from this port included tobacco and iron that was mined along the Patapsco River.

About 1774, the Ellicott brothers from Bucks County, Pennsylvania, established the area's only, and the Nation's most technologically advanced, gristmills. With this success, Ellicott's Mills, which later was renamed Ellicott City, became the center of activity in Upper Anne Arundel. Agriculture began to shift from tobacco to more diverse practices that focused primarily on wheat and other small grain. Farmers in the region also began applying lime and fertilizer to the farmland.

The growing economy afforded the development of improved transportation. Frederick Pike was built to connect the cities of Baltimore and Wheeling, West Virginia. Route 1 was continually being widened to handle the growing shipment of goods and increased travel between major cities. By 1828, the groundwork for the B&O Railroad was underway (Holland 1987).

Because Howard County is located between the Baltimore and Washington metropolitan areas, it has experienced a higher degree of urbanization in the last 50 years than it did in the previous three centuries. In 1950, the population of Howard County was 23,119; in 2000, it was 247,842.

Industry and Transportation

Howard County, which is one of 24 counties in Maryland, is part of the Washington metropolitan area. There are numerous major private sector employers in the county.

Howard County has an excellent transportation infrastructure that includes I-70 and I-95, U.S. Route 29, Maryland Routes 32, 100, and 175, and many other highways; however, because of their close proximity to Washington and Baltimore and urban sprawl, a number of these highways have congestion problems during peak flow periods. Commercial, industrial, and passenger rail transportation services are readily available in the county, and four commuter rail locations serve heavy employment areas in the county. Air transportation is provided by the Baltimore-Washington International Airport as well as Reagan National and Washington Dulles International Airports.

Water Supply

Howard County depends on Baltimore City and the Washington Suburban Sanitary Commission (WSSC) for all its public potable water supply. The present average daily water requirement for the county is estimated at 24.3 million gallons.

About 21.7 million gallons per day is supplied through the public system, which serves 83 percent of the county's population. The remainder of the county's population is served by private wells or surface water supplies that produce an estimated 2.6 million gallons per day. By the year 2015, the public system is expected to serve about 86 percent of the county population.

The Howard County public water system is currently supplied through three connections to the Baltimore County water system (which in turn is supplied from the

Baltimore City system) and through one connection to the WSSC system. Howard County both owns and operates the distribution system within its boundaries. It participates in the planning and development and contributes to the capital cost of improvements to the public potable water system outside of the county with these other jurisdictions.

The primary source of water to Howard County from the City of Baltimore is the Ashburton Filtration Plant. The raw water supply to the Ashburton Filtration Plant is Liberty Reservoir, which is located on the North Branch of the Patapsco River. The reservoir has a storage capacity of 43 billion gallons and a safe yield of 93 million gallons per day.

WSSC supplies water to Howard County through the All Saints Road connection. The connection allows Howard County a maximum daily withdrawal rate of 5.0 million gallons. The raw water source for the WSSC supply is the Rocky Gorge Reservoir on the Patuxent River. Water is treated at the Patuxent Water Filtration Plant and then conveyed east to All Saints Road in Howard County.

Ultimately, Howard County will be provided with adequate capacity in the Leakin Park Pump Station and Catonsville Transmission Main to supply a maximum day demand of 50.5 million gallons (48.8 million gallons from the U.S. Route 40 connection and 1.7 million gallons from the Gun Road connection). This capacity, along with the capacity available from the county's other connections, will satisfy Howard County's needs as it builds out of the planned service area.

Ground water from the crystalline rock formations that underlie Howard County will continue to be the major source of potable water in the western part of the county, which is outside the county's planned water service area. Howard County has no plans to allow the development of community wells. Recharge of the aquifer occurs primarily through the infiltration of rain through surface soils and into the bedrock. Total average daily recharge of the aquifer was estimated to be 0.36 million gallons per square mile or 54.2 million gallons for the entire nonplanned water service area.

The overall quality of the ground water flowing through the crystalline rock in Howard County was good to excellent, although the soft, acidic nature of the water can cause corrosion of metal plumbing. It has essentially remained constant over the past 30 years, and there are no long-term degradation problems with the quality of ground water within the western part of the county (Howard County master plan for water and sewerage 1999).

Geology and Associated Soils

Scott Southworth, U.S. Geological Survey, helped to prepare this section.

Howard County lies mostly within the Piedmont Physiographic Province of Maryland except for the extreme eastern and southeastern parts of the county, which are underlain by unconsolidated sediments of the Atlantic Coastal Plain Physiographic Province. The Piedmont Province is characterized in the county by several distinct sections. These sections are bounded by faults that separate different geologic formations.

Piedmont Province

The extreme western part of the county is underlain by metasiltstone and phyllite (both impregnated with vein quartz) of the Marburg Formation, sometimes referred to as the Gilis Group and the Prettyboy Schist Formation of the Westminster Terrane. Soils generally associated with this region are those in the Blocktown, Brinklow, Glenelg, Glenville, Occoquan, and Baile series. The Blocktown, Brinklow, and Occoquan soils are shallower than the other named soils and generally have more rock fragments associated with them.

The west-central part of the county is underlain by the Liberty Complex, which consists of a heterogeneous assemblage of metagraywacke and schist (the Morgan Run Formation) and quartzofeldspathic gneiss (the Sykesville Formation). Soils associated with these formations are those in the Glenelg, Glenville, Manor, Baile, Gaila, and, to a lesser extent in the Sykesville Formation, Gladstone series (fig. 2). Minor inclusions of Brinklow and Blocktown soils are common on eroded interfluves, shoulder slopes, and steep backslopes. Both of these soils contain map-scale bodies of mafic and ultramafic rocks. The Legore and Montalto soils are associated with the mafic and ultramafic rocks, which are in a narrow band that has a north-south orientation. This band is about one-quarter to one-half mile wide and runs from the Patapsco River in the north through Slacks Corner, Ivory, and Glenelg down to Triadelphia Reservoir in the south. A few isolated pods are located near Carrs Mill, Woodbine, and Hoods Mill. The western boundary of the fault zone is the Pleasant Grove fault, and the sheared rocks immediately east of the fault zone are in the Pleasant Grove Formation. Rock outcrops are commonly associated with this formation because of the amount of quartz in the rock. The best expression of this is south of I-70 along Maryland Route 94. The eastern boundary is also bounded by a fault, but the shear zone is not as wide as it is along the Pleasant Grove fault.

The eastern half of the Piedmont Province can be subdivided into two distinct sections. The western part consists of gneiss (Baltimore Gneiss) overlain by quartzite (Setters Quartzite), marble (Cockeysville Marble), and schist (Loch Raven and Oella Formations). The major soils associated with the Cockeysville Marble are those in the Benevola and Wiltshire series. The major soils associated with the Loch Raven and Oella Formations generally have a higher content of mica than their counterparts in other areas of the county. The easternmost part of the Piedmont Province, around Elioak, Longfellow, and Atholton and beyond, consists of a complex assemblage of igneous rocks, which includes gneiss, amphibolite, serpentine, and granite. The soils associated with this assemblage of rocks are those in the Bannertown, Gladstone, Jackland, Legore, Mount Lucas, and, to a lesser extent, Glenelg series. Because of the complexity of this region, it is common to find a thin remnant of coastal sediments overlying the residuum. This region has been highly altered by residential and urban development.

Figure 2.—The Agricultural Research Farm in Clarksville conducts research relating to animal health, soils, and waste management. The Glenelg, Gladstone, and Manor soils, which are in areas of the farm, represent a major portion of the Piedmont Province in Maryland.

Atlantic Coastal Plain Province

The rocks of the eastern part of the Piedmont Province are uncomformably overlain by unconsolidated gravel, sand, and clay of the Patuxent Formation and terrace deposits that collectively make up the Atlantic Coastal Plain Province. Major soils associated with the Atlantic Coastal Plain Province include those in the Beltsville, Chillum, Croom, Evesboro, Fallsington, Russett, Sassafras, and Woodstown series. The region is highly complex, and remnant coastal sediments commonly overlie the residuum in areas of the Glenelg, Gladstone, Legore, and Manor soils. This region has been highly altered by urban, industrial, and residential development.

Agriculture

Caragh B. Fitzgerald, Maryland Cooperative Extension, Howard County, helped to prepare this section.

Howard County has some of the richest soils suitable for agriculture operations in the State. It also receives a good amount of rainfall and is close to markets. In 1968, about 72 percent of the 162,100 acres in the county was identified as prime farmland or land suitable for intensive agricultural production (Matthews and Hershberger 1968). However, the recent growth of residential areas in Howard County due to urban sprawl has significantly reduced the acreage of agricultural land that was once considered prime farmland. The entire county is under immense pressure from residential and commercial developers. The 1997 county profile shows an 11 percent decrease in farmland, from 44,623 acres in 1992 to 39,846 in 1997, but an increase in the average size of farms by 7 percent, from 117 acres to 125 acres, within the same period of study. Despite the loss of farmland in the county, agriculture is still the biggest revenue generator, accounting for about $87.6 million of the county's assessable tax base (Howard County comprehensive plan 2000; USDA NASS 1997).

Many of the soils in the county are well suited to intensive agricultural production. Examples of these soils are those in the Benevola, Gladstone, Glenelg, Legore, and Manor series. The main agricultural enterprises in areas of these soils are dairying and growing fruit, grain, vegetable, and nursery products. Shallower soils, such as those in the Blocktown series, are better suited to perennial hay crops and to grasses and legumes for pasture.

Most of the orchards are in the western part of the county. They are in areas of the Brinklow, Gaila, Glenelg, Manor, and Occoquan soils.

Soil erosion by wind or water and contamination of surface water or ground water by excess plant nutrients, primarily nitrogen and phosphorus, are common concerns when maximizing agricultural productivity of soils. Establishing and maintaining buffers, such as hedgerows and woodlots, and not plowing in the fall help to control erosion. Applying a system of conservation tillage, such as minimum tillage or no-tillage, and planting a cover crop help to control erosion.

Stripcropping in conjunction with diversions and waterways mitigates the velocity of water moving over the soil surface by breaking up the total slope lengths. Diversions break up the slope lengths and redirect the surface flow of the fields to a controlled waterway or outlet. Using proper crop rotations and alternating the vegetative cover, for example, corn with small grain, hay, or soybeans, will reduce the runoff rate. Erosion-control practices benefit the environment by reducing the rate of runoff, minimizing sedimentation, increasing the organic matter content of the soil, increasing the amount of water that infiltrates the soil, conserving soil moisture, and reducing the amount of fuel used to operate equipment.

Organic matter is an essential element in soil quality, soil tilth, and water infiltration. The average organic matter content in the soil surface ranges from 1 to 3 percent in Howard County; however, in some severely eroded areas on steep slopes and around

rock outcrop, the organic matter content is less than 1 percent. In recent years, with the removal of small grain residue as straw or silage and the utilization of corn as silage and corn stubble grazing as a feed source, the organic matter content of soils in the county has declined.

Organic matter content can be increased by growing green manure crops, such as winter cover crops; applying animal manure; and adopting no-till crop production practices. An increase in the organic matter content improves the water- and nutrient-holding capacity of the soil and thus helps to control erosion, minimize compaction, and reduce the incidence of plant diseases.

Contour stripcropping is not recommended, nor is it practical, in areas of soils that have a rocky surface or in areas where the soils are intermingled with rock outcrop. In Howard County, detailed soil map units MgF, Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky, and MkF, Manor-Brinklow complex, 25 to 65 percent slopes, very rocky, have a rocky surface and steep and very steep slopes. The rockiness in combination with the steep and very steep slopes inhibit the establishment of contour strips.

Crops

Because livestock production in the county is extensive, field and forage crops are the predominant crops produced. Corn and soybeans are the primary crops grown for grain. The percentage of corn harvested for grain or chopped for silage varies somewhat seasonally depending on the producer's need for feed and the weather. In dry years, when the corn yield is depressed and feed supplies are low, more acres of corn are chopped. Small grain crops, such as wheat, barley, and hay, generally are harvested for grain and silage and occasionally are used as pasture. In 1997, a total of 39,846 acres was used as cropland. Crops were harvested on 23,535 acres, which is a 10 percent decrease from the number of acres harvested in 1992 (USDA NASS 1997).

In 1997 and 2001, the yields per acre for field and forage crops were, respectively, 69.2 and 119.8 bushels of corn for grain; 10.6 and 17.1 tons of corn for silage; 27 and 40 bushels of soybeans; 62.4 and 60.0 bushels of wheat; 86.2 and 77.8 bushels of barley; and 1.93 and 2.20 tons of hay (USDA NASS 2002).

The horticulture, nursery and greenhouse, and turf grass industries in Howard County make up the second largest commodity group in Maryland, with 16 percent of the State's total cash agricultural sales. The production of specialty crops has significantly increased over the past decade due in part to the urbanization of the county and region. In 1997, there were 98 operations with 46 farms in production. The farms encompassed 1,544 acres (USDA NASS 1997). Smaller farms suited to certified organic farming are emerging forms of agriculture in the county. About 10 percent of all certified organic farms in Maryland are in Howard County. These farms have an average size of less than 20 acres and are operated by full-time farmers.

Livestock

Livestock and livestock products are important farm commodities of the county. In 1992, a total of 8,864 head of livestock were reported, compared to 6,458 head of livestock in 1997, a decrease of 25 percent. The livestock in 1992 and 1997 included, respectively, 4,624 and 3,370 cattle and calves; 1,429 and 1,357 dairy cows; 1,730 and 1,254 hogs and pigs; and 1,081 and 477 sheep and lambs (USDA NASS 1997). The number of horses in the county is no longer reported in the agricultural census; however, the equine industry in Howard County plays an integral role in the county's heritage, identity, and economy. The industry generates about $140 million in business annually.

Type and Size of Farms

Between 1992 and 1997, the number of farms in Howard County decreased from 382 to 318, or approximately 17 percent. In 1997, there were 54 farms less than 10 acres in size, 131 farms ranging from 10 to 49 acres in size, 85 farms ranging from 50 to 179 acres in size, 28 farms ranging from 180 to 499 acres in size, 11 farms ranging from 500 to 999 acres in size, and 9 farms 1,000 acres or more in size. The number of farms less than 1,000 acres in size decreased between 1992 and 1997, but the number of farms that were more than 1,000 acres in size increased during that period (USDA NASS 1997).

Of the 318 farms in the county in 1997, full-time farming operations accounted for 127 farms (a decrease of 28 percent since 1992) and part-time farming operations for the remaining 191. The bulk of farm cash receipts were derived from crop sales, which accounted for 62 percent, and livestock sales, which accounted for 38 percent of the market value of agricultural products (fig. 3). The county has had an overall decrease in farming activities over the past several years.

Mineral Resources

Howard County's principal mineral resources are sand and gravel, materials of great importance to the construction industry. The sand and gravel, which is limited to areas of the Atlantic Coastal Plain Province, stretches from the Howard and Anne Arundel County border westward to a line running northeast to southwest, about midpoint between Maryland Route 29 and I-95. There is potential for crushed stone production west of I-95, in areas of the Piedmont Province, based on mineral resources prevalent in the province.

Currently, there is only one mining operation in Howard County. This facility quarries natural building stone.

Figure 3.—A typical beef operation in an area of Glenelg loam. As a result of urban sprawl, the traditional dairy farm operations in the county are being replaced by beef or horse operations.

A number of factors constrain or limit the mining industry in Howard County, including urbanization, legal restrictions, environmental concerns associated with surface mining, easements, incompatible zoning, and prohibitive property values. These restrictions have resulted in the decrease of mining activities in the county. Restrictions on mining operations are incorporated in State permit procedures and Howard County's zoning regulations, which allow sand and gravel mining only in rural and industrial areas. Mining operations are not permitted in residential districts other than rural districts.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Clarksville in the period 1961-90. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on length of the growing season.

In winter, the average temperature is 33.4 degrees F and the average daily minimum temperature is 23.1 degrees. The lowest temperature on record, which occurred on January 22, 1984, is -18 degrees. In summer, the average temperature is 73.2 degrees and the average daily maximum temperature is 85.3 degrees. The highest recorded temperature, which occurred on July 16, 1988, is 103 degrees.

Growing degree days are shown in table 1. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 45.94 inches. Of this, 25.33 inches, or 55 percent, usually falls in May through October. The growing season for most crops falls within this period. In 2 years out of 10, the rainfall in May through October is less than 13.27 inches. The heaviest 1-day rainfall during the period of record was 9.13 inches on June 22, 1972. Thunderstorms occur on about 28 days each year, and most occur during the period ranging from May through August.

The average seasonal snowfall is about 22.3 inches. The greatest snow depth at any one time during the period of record was 23 inches. On the average, 22 days of the year have at least 1 inch of snow on the ground. The number of such days varies greatly from year to year. The heaviest 1-day snowfall on record was 18.2 inches recorded on February 23, 1987.

The average relative humidity in midafternoon is about 55 percent. Humidity is higher at night, and the average at dawn is about 70 percent in winter and 80 to 85 percent in summer. The sun shines about 63 percent of the time possible in summer and about 52 percent in winter. The prevailing wind is from the west. Average windspeed is highest, about 11 miles per hour, in March and April.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The

unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept or model of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Survey Procedures

This soil survey updates the survey of Howard County published in 1968 (Matthews and Hershberger 1968). It provides additional data and soil interpretations and larger maps, which show the soils in greater detail. The soils in this survey are described to a greater depth than in the previous survey. Many of the soil series and map unit names have been changed because of new information and changes in the national system for soil classification. Although some soil boundaries have been readjusted, many are essentially the same as those in the original survey.

The general procedures followed in making the survey are described in the "National Soil Survey Handbook" of the Natural Resources Conservation Service (USDA NRCS n.d.). The earlier published soil survey, the county geology map, and other references were used to prepare the manuscript and to plan the soil transects.

Before fieldwork began, color infrared aerial photographs taken in 1991 at a scale of 1 inch:1,000 feet were studied. These aerial photographs provided information that was significant in determining the location of certain soil boundaries in woodland areas. All the profile descriptions from the 1968 report representing the modal or central concept of the soil series were investigated and described using new terminology and nomenclature. They were used as a starting point for evaluating the old map units. A reconnaissance was made by vehicle before the landscape was traversed on foot. The field transects were used to identify any changes needed in the central concept of the series and to determine map unit composition. Some areas required remapping, particularly urban areas, such as Columbia and Ellicott City, and areas on alluvial flood plains. Soil boundaries were determined on the basis of soil examinations, observations, and photo interpretation.

Some of the soil series in the 1968 survey could not be used. New information on soil temperature, particle-size distribution, and water tables indicated the need for the establishment of new series. Many of the new series and some of the older series were sampled for chemical and physical analyses and for analyses of engineering properties. Particle-size distribution, mineralogy analyses, and special studies related to soils throughout the county were made by the Pedology Research Laboratory, Department of Agronomy, University of Maryland. A description of the laboratory procedures can be obtained from the laboratory or from the State office of the Natural Resources Conservation Service.

Formation of the Soils

The origin and development of the soils in Howard County are explained in this section. The five major factors of soil formation are identified, and their influence on the soils in the county is described. Also, the morphology of the soils is related to horizon nomenclature and the processes of horizon development.

Factors of Soil Formation

Soil is a three-dimensional body consisting of organic matter, mineral matter, air, and water. Soils formed through the chemical and physical weathering of geologic materials. The extent of the weathering and the characteristics of any soil depend on the nature of the parent rock; the climate; the relief, or lay of the land; the plant and animal life in and on the soil; and the length of time these factors have affected development.

In a small area, such as Howard County, the vegetation, climate, and time factors vary only slightly. The nature of the parent material and the relief are responsible for most of the differences in soil properties. The nature of the parent rock determines the texture and mineral content of the soils. Relief affects drainage, aeration, runoff, erosion, and exposure to sun and wind. Plant and animal life influences soil characteristics by physical and chemical removals and additions. Climate influences the nature and extent of the weathering processes. Time is required for the processes responsible for soil formation. Long periods generally are needed for soil development.

Parent Material

Parent material is the unconsolidated mass from which the soils are formed. It determines the mineralogical and chemical composition of the soil and, to a large extent, the rate at which soil-forming processes take place. In the early stages of soil formation, the mineralogical, physical, and chemical properties of the soil closely resemble those of the parent material. The composition of Glenelg soils, for example, is similar to the acid phyllite from which the soils formed. As a soil ages, the processes of soil formation alter rocks and minerals, and the resulting soils usually have different characteristics.

Howard County is unique in that it contains two distinctively contrasting physiographic regions. The Piedmont Province is the major physiographic region in the county. Soils in this region formed in place directly over the original bedrock. The Atlantic Coastal Plain Province is of minor extent in the county. Soils in this region formed in unconsolidated sediments deposited by water and wind. Because these sediments were deposited in fluvial and marine environments, they are referred to as fluviomarine. A 2- to 3-mile area paralleling I-95 is known as the fall line where the Atlantic Coastal Plain Province meets the Piedmont Province. The soils in this area vary greatly and are not easily identified in the field. They have properties of coastal sediments and Piedmont materials.

Many soils in Howard County formed in place in residuum directly over the original bedrock. Brinklow, Blocktown, Glenelg, Glenville, Gaila, Manor, and Occoquan soils

formed in material derived from tan, light silvery gray, olive green, and dull purple phyllite and schist with varying amounts of mica. Benevola and Wiltshire soils formed in material derived from marble bedrock. Legore, Montalto, and Relay soils formed in material derived from mafic and ultra mafic rocks. Gladstone and Bannertown soils formed in material derived from gneissic rocks. Alloway, Beltsville, Chillum, Croom, Evesboro, Fallsington, Russett, and Sassafras soils formed in coastal sediments.

Climate

The climate of Howard County is the humid-temperate, continental type. Some characteristics of the soils in the county indicate that this climate prevailed when the soils were forming and that it affected soil formation. Many of the soils are acid and strongly leached. The effect of climate on the formation of soils has been nearly uniform throughout the county. The formation of some soils, however, may have been affected by a microclimate caused by differences in relief.

Plants and Animals

Vegetation, animals, bacteria, and fungi affect soil formation. The vegetation is generally responsible for the amount of nutrients. Earthworms, cicadas, and other burrowing animals help to keep the soil open and release nutrients for plant food. The native forests in Howard County have had more influence on soil formation than have any other living organism. People, however, have greatly influenced the surface layer of soils when they cleared the forests and plowed the land. They also have added fertilizers, mixed some of the soil horizons, and moved soil materials from place to place.

Relief

The relief in Howard County is dominated by rolling valleys and steep ridges. It has been influenced by the strongly folded and faulted metamorphic and igneous rocks and their degree of resistance or susceptibility to physical and chemical weathering and erosion. The soils in highly dissected areas along major rivers, such as the Patuxent, Patapsco, and Middle Patuxent Rivers, are a direct result of erosion. Gaila, Glenelg, Brinklow, Blocktown, and Occoquan soils are on the lower hills and ridges. Legore, Montalto, and Relay soils are on the higher ridges in areas of igneous rock. The coastal plain and fall line regions have been highly dissected by erosion, which is a result of the elevation change in the county from about 780 feet near Poplar Springs to about 100 feet near Elkridge. In these regions, erosion has removed the coastal sediments, exposing the residuum. Legore and Montalto soils formed in these areas.

Relief affects soil formation through its effect on surface drainage, the permeability of the soil, the plant and animal life on and in the soil, and some of the soil-forming processes. Baile and other poorly drained soils in depressions are generally wet. Glenelg and Gaila soils are in the higher convex areas and are better drained than the Baile soils. Soils on the steeper slopes are well drained and generally have weakly expressed horizons as a result of erosion. They include the Blocktown and Brinklow soils.

Natural differences in elevation and in the shape of the land surface account for many of the differences among soils that formed in the same kind of parent material. Because of differences in topography, free water leaves well drained soils and accumulates in poorly drained soils.

Time

The length of time the soil-forming factors have acted on the mineral material is indicated by the degree of development in the soil profile. Soils formed in alluvium, such as those in the Hatboro and Codorus series, are considered young or recent

because their parent material has been in place for a shorter period of time than that of other soils in the county. These soils have less distinct horizons than older soils on uplands. Glenelg, Gladstone, and Legore soils have well developed profiles. The parent material of these soils has been in place for a period long enough that distinct horizons have had time to develop.

Morphology of the Soils

The morphological features of soil are the result of soil-forming factors. They are expressed in the development of different layers, or horizons, which make up a soil profile. The soil profile extends from the surface down to material that is little altered by the soil-forming processes.

Most soils have three major horizons—the A, B, and C horizons. Some soils, particularly those in forests, also have an O horizon at the surface. Numbers or lowercase letters indicate subdivisions of the major horizons. For example, the Bt horizon has accumulated clay from the overlying horizons and is the most developed part of a B horizon. Glenelg soils have a Bt horizon.

The O horizon is an organic layer. It consists of organic material, such as twigs, leaves, dead roots, or humified organic matter, mixed with a small amount of mineral material. Soils in forested areas may have a thin O horizon. Examples are the Legore, Manor, and Montalto soils.

The A horizon is a mineral surface layer. It is darkened by humified organic matter. In cultivated areas, the material in this horizon is mixed with material from the underlying horizons and the result is a plow layer, or an Ap horizon. The amount of humus or organic matter in the horizon varies in different soils and ranges from very low to very high. The organic matter content in the Ap horizon of Baile and Glenville soils can range up to 4 percent in places.

The E horizon, which commonly occurs in well developed, undisturbed soils, is a mineral subsurface layer. It is characterized by intense leaching, or eluviation, of clay and iron. An E horizon occurs if considerable leaching has taken place and organic matter has not darkened the material. This horizon is normally lighter in color than any other horizon in the profile. In cultivated areas, the material of this horizon is commonly mixed with the overlying A horizon, and an E horizon may not occur.

The B horizon is a mineral subsoil layer and normally underlies an Ap or E horizon. It is characterized by the accumulation, or illuviation, of clay, iron, aluminum, or other compounds leached from the surface layer. In some soils, such as Glenelg and Benevola soils, the B horizon formed through alteration of the original material and through accumulation or illuviation. The alteration can result from weathering of the parent material; the release of iron, resulting in rusty colors; and the development of a soil structure in place of the structure of the original unconsolidated sediments. The B horizon commonly has blocky or prismatic structure. It generally is firmer and lighter in color than the A horizon and is darker than the C and E horizons. In places affected by previous erosion, the B horizon has been truncated and is relatively thin, only 10 to 20 inches thick. Gaila and Occoquan soils are representative of this characteristic. Almost all of the soils in Howard County have a B horizon.

The C horizon is a mineral layer in the substratum, below an A or B horizon. It consists of material that is little altered by the soil-forming processes, but it may be modified by weathering. When the soil material of a C horizon is different than the parent material from which the overlying A and B horizons developed, the C horizon is labeled as a 2C horizon. Most of the soils in Howard County have a C or 2C horizon. In some young soils, such as those that formed in recent alluvium, the C horizon extends to or nearly to the surface. These soils do not have an E or B horizon. Hatboro soils are an example.

Processes of Soil Formation

Soil forms through complex processes that can be grouped into four general categories—additions; removals, or losses; transfers (from one horizon to another); and transformations. These processes affect soil formation in differing degrees.

The accumulation and incorporation of organic matter in the surface layer is an example of an addition. This addition is responsible for the formation of the A horizon and is the main reason for the dark color of the surface horizon in the mineral soils of Howard County. Heat from the sun and water from precipitation are also considered additions. These additions assist with chemical and physical reactions and affect other processes in the soil.

Carbonates, soluble salts, and the soluble products of mineral weathering that are leached from the soil profile are examples of removals. In the soils of Howard County, some of the compounds were removed before the parent materials were deposited. Another example of a removal is erosion. On sloping soils most of the surface layer may be lost and redeposited at the bottom of the slope or in a waterway. The deposited materials are considered an addition.

The translocation of clay from the A and E horizons to the B horizon, which occurs in many soils in the county, is an example of a transfer. In this process, clay is dispersed in the upper horizons and subsequently moved downward by water into the lower horizons, where it may be deposited by filtering, flocculation, or both. Thus, the A or E horizon becomes the zone of eluviation, or loss, and the B horizon becomes a zone of illuviation, or gain. In Benevola, Glenelg, Gladstone, Legore, and Sassafras soils, the B horizon has more clay than the parent material (C horizon) and the surface and subsurface layers (A and E horizons). In the B horizon of most soils, thin clay films are in pores and on faces of peds. The clay has been transferred from the A and E horizons.

Another important example of a transfer is the leaching or diffusion of iron in the soil. This process takes place under saturated soil conditions where there is no molecular oxygen. The naturally well drained soils in the county have a yellowish brown or reddish brown subsoil. The color results from finely divided iron oxide minerals (ferric iron) that coat the sand, silt, and clay particles. Under saturated conditions, as in the poorly drained soils in the county, the iron oxide minerals are chemically reduced to a more soluble form (ferrous iron). This form of iron is transported with water and can be transported completely out of the horizon. The remaining uncoated soil particles have a dominantly gray color. Normally, part of the iron is reoxidized and segregated into the form of stains, concretions, or bright yellow and red soft masses within the horizon. In the poorly drained Hatboro and Baile soils, this type of transfer has occurred throughout the profile. Other examples of transfers include the physical mixing of soil by animals, plants (as when trees tip over), and humans. Nutrient recycling (bringing mineral elements to the soil surface) by plants is also considered a transfer.

The weathering of primary materials to clay minerals in the soil is an example of a transformation. It occurs by physical and chemical means, such as by the transformation of micas and feldspars to clays. This process can increase the content of clay during soil formation. Another kind of transformation occurs when clay is derived from primary materials. Some iron generally is freed as a hydrated oxide. Depending on the degree of hydration, the oxide is generally red. Even a small amount of the oxide causes the subsoil to be reddish. Iron oxide colors the subsoil even in soils where not enough clay minerals have accumulated to form a textural B horizon, as in the Manor soils.

General Soil Map Units

The general soil map in this publication shows the soil associations in this survey area. Each association has a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, an association consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The components of one unit can occur in another but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils can be identified on the map. Likewise, areas where the soils are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one association differ from place to place in slope, depth, drainage, and other characteristics that affect management.

1. Occoquan-Brinklow-Glenelg association

Gently sloping to very steep, shallow to very deep, well drained soils; formed in residuum derived from schist

These soils are on ridges and side slopes in highly dissected areas in the western part of the county and on very steep side slopes along streams (fig. 4). Slopes range from 3 to 65 percent.

Figure 4.—Typical landscape in an area of the Occoquan-Brinklow-Glenelg association in the western part of the county. Most areas of this association are used as pasture or hayland because the soils are droughty.

This association makes up about 3 percent of the county. It is about 36 percent Occoquan soils, 34 percent Brinklow soils, 14 percent Glenelg soils, and 16 percent soils of minor extent (fig. 5).

Occoquan soils are on gently sloping and strongly sloping side slopes and summits. They have a solum that is less than 11 inches thick and are deep to bedrock. They have a loamy substratum. Brinklow soils are on strongly sloping to very steep side slopes. They are moderately deep and have a loamy subsoil. Glenelg soils are on nearly level to strongly sloping side slopes. They are very deep and have a loamy subsoil.

Of minor extent in this association are Baile, Glenville, Manor, Codorus, Hatboro, and Blocktown soils. Baile and Glenville soils are in drainageways and slight depressions and on footslopes. Baile soils are poorly drained, and Glenville soils are moderately well drained. Manor soils have a loamy substratum that averages less than 18 percent clay throughout. They have a high content of mica and are very deep to bedrock. Blocktown soils have bedrock within a depth of 20 inches. They are on steep side slopes. Codorus and Hatboro soils are on the adjacent flood plains. Codorus soils are moderately well drained, and Hatboro soils are poorly drained.

2. Glenelg-Manor-Glenville association

Nearly level to very steep, very deep soils; formed in residuum derived from micaceous schist and phyllite

These soils are on gently rolling to very steep upland flats, ridges, and side slopes in dissected areas in the western and central parts of the Piedmont Province. Slopes range from 0 to 65 percent but are commonly less than 50 percent.

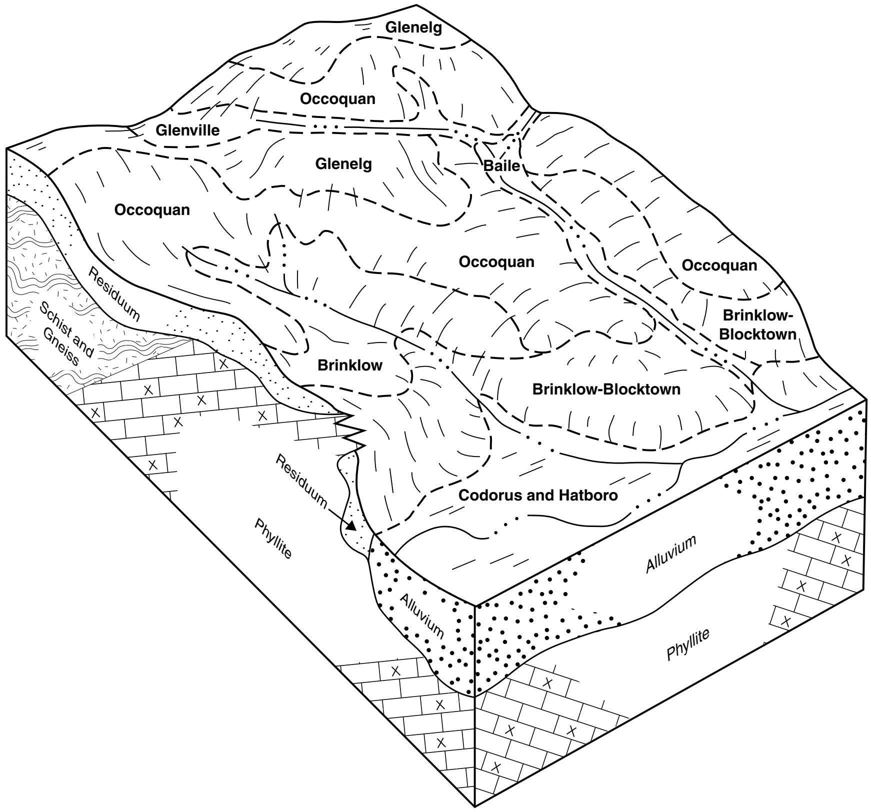

Figure 5.—Relationship of soils, topography, and underlying material in the Occoquan-Brinklow-Glenelg association.

This association makes up about 55 percent of the county. It is about 51 percent Glenelg soils, 25 percent Manor soils, 9 percent Glenville soils, and 15 percent soils of minor extent (fig. 6).

Glenelg soils are on nearly level to strongly sloping side slopes. They are very deep and have a loamy subsoil. Manor soils are in areas ranging from gently sloping narrow summits and ridgetops to very steep side slopes. They have a loamy substratum that averages less than 18 percent clay throughout. They have a high content of mica and are very deep to bedrock. Glenville soils are on concave uplands and in upland drainage swales. They are very deep and are moderately well drained.

Of minor extent in this association are Baile, Brinklow, Gaila, and Gladstone soils; soils from the Atlantic Coastal Plain Province; and areas of Urban land and rock outcrop. Baile soils are in drainageways and slight depressions and on footslopes. They are poorly drained. Brinklow soils are on narrow shoulder slopes, nose slopes, and very steep side slopes. They are moderately deep. Gaila soils are in eroded areas on convex knobs and shoulder slopes. The soils from the Atlantic Coastal Plain Province are intermingled with areas of Urban land along the I-95 and Maryland Route 29/100 corridors. Rock outcrop is common in areas near Florence, Daisy, Jennings, and Chapel Woods.

3. Gladstone-Glenville-Manor association

Nearly level to very steep, moderately deep to very deep soils; formed in residuum derived from gneiss, granite, and pegmatite

These soils are on gently rolling to very steep upland flats, ridges, and side slopes in dissected areas in the central part of the Piedmont Province. Slopes range from 0 to 65 percent but are commonly less than 50 percent.

This association makes up about 18 percent of the survey area. It is about 60 percent Gladstone soils, 15 percent Glenville soils, 9 percent Manor soils, and 16 percent soils of minor extent.

Gladstone soils are on nearly level to strongly sloping side slopes. They are very deep and have a loamy subsoil. Glenville soils are on concave uplands and in upland drainage swales. They are very deep and are moderately well drained. Manor soils

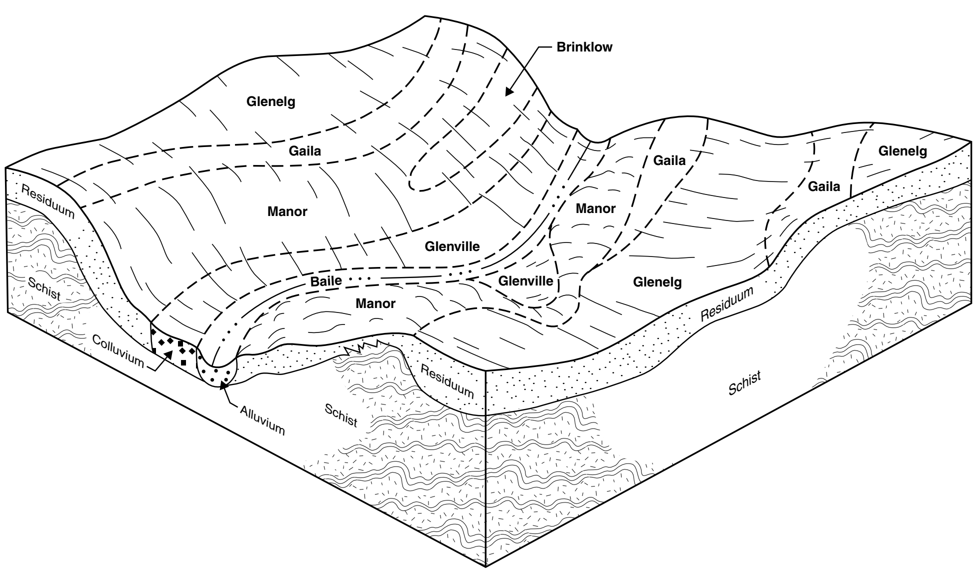

Figure 6.—Relationship of soils, topography, and underlying material in the Glenelg-Manor-Glenville association.

are in areas ranging from gently sloping summits and ridgetops to very steep side slopes. They are very deep to bedrock, have a high content of mica, and have a loamy substratum that averages less than 18 percent clay throughout.

Of minor extent in this association are Baile, Bannertown, Glenelg, and Legore soils; soils from the Atlantic Coastal Plain Province; and areas of Urban land. Baile soils are on footslopes and in drainageways and slight depressions. They are poorly drained. Bannertown soils are moderately deep and are on moderately steep to very steep side slopes. They have a sandy subsoil that is not well developed. Glenelg soils are on nearly level to strongly sloping side slopes. They are very deep and have a loamy subsoil. Legore soils are very deep and have a heavy loam subsoil. The soils from the Atlantic Coastal Plain Province are intermingled with areas of Urban land along the I-95 and Maryland Route 29/100 corridors.

4. Legore-Gladstone-Watchung association

Gently sloping to very steep, very deep, well drained to poorly drained soils; formed in residuum derived from gneiss, diabase, and other dark basic igneous rocks

These soils are on upland flats, ridges, and side slopes in gently rolling to dissected areas of the central Piedmont Province. They are dominantly east of Route 29 but also occur in a narrow strip along Route 32. Slopes range from 0 to 65 percent but are commonly less than 50 percent.

This association makes up about 5 percent of the survey area. It is about 65 percent Legore soils, 7 percent Gladstone soils, 5 percent Watchung soils, and 23 percent soils of minor extent.

Legore soils are very deep and well drained and have a heavy loam subsoil. They formed in material derived from basic igneous rocks. Gladstone soils are on nearly level to strongly sloping side slopes. They are very deep and have a loamy subsoil. Watchung soils are on slightly concave upland flats and in upland drainage swales. They are very deep and poorly drained. They formed in material derived from basic igneous rocks.

Of minor extent in this association are Bannertown, Glenville, and Manor soils; soils from the Atlantic Coastal Plain Province; and areas of Urban land. Bannertown soils are on moderately steep to very steep side slopes. They are moderately deep and have a sandy subsoil that is not well developed. Glenville soils are on concave uplands and in upland drainage swales. They are very deep and moderately well drained. Manor soils are in areas ranging from gently sloping summits and ridgetops to very steep side slopes. They have a loamy substratum that averages less than 18 percent clay throughout. They have a high content of mica and are very deep to bedrock. The soils from the Atlantic Coastal Plain Province are intermingled with areas of Urban land along the I-95 and Maryland Route 29/100 corridors.

5. Benevola-Wiltshire association

Nearly level to strongly sloping, very deep, well drained to poorly drained soils; formed in residuum derived from marble and in colluvium derived from schist over marble residuum

These soils are in gently rolling valleys of the central part of the Piedmont Province, dominantly around the Clarksville and Linden Church areas. Slopes range from 0 to 15 percent but are commonly less than 8 percent.

This association makes up about 1 percent of the survey area. It is 50 percent Benevola soils, 30 percent Wiltshire soils, and 20 percent soils of minor extent (fig. 7).

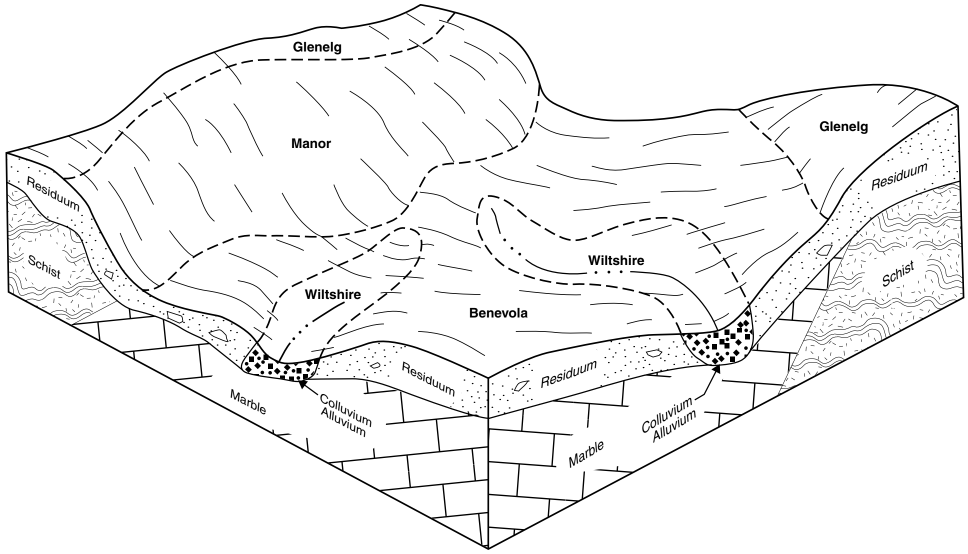

Figure 7.—Relationship of soils, topography, and underlying material in the Benevola-Wiltshire association.

Benevola soils are on nearly level to strongly sloping side slopes. They are very deep and have a clayey subsoil. Wiltshire soils are in slightly concave upland drainage swales. They are very deep and moderately well drained. They have a loamy subsoil.

Of minor extent in this association are Baile, Gladstone, Glenelg, Glenville, and Manor soils. Baile and Glenville soils are on footslopes and in drainageways and slight depressions. Baile soils are poorly drained. Glenville soils are moderately well drained. Gladstone, Glenelg, and Manor soils are on the higher ridges and steeper backslopes. They have a loamy subsoil and are brighter in color than the Benevola and Wiltshire soils.

6. Urban land-Russett-Sassafras association

Gently sloping and strongly sloping, very deep, well drained to poorly drained soils; formed in fluviomarine sediments

These soils are in gently rolling valleys of the Atlantic Coastal Plain Province, generally in areas south of I-95. Slopes range from 0 to 15 percent but are commonly less than 8 percent.

This association makes up about 14 percent of the survey area. It is 46 percent Urban land, 13 percent Russett soils, 11 percent Sassafras soils, and 30 percent soils of minor extent.

Urban land consists of areas where the surface is covered by concrete or pavement. It consists of many acres of land used for residential development or as a site for warehousing facilities. Most, if not all, of the original soil material has been altered by cutting and filling. Russett soils are on linear or concave uplands and side slopes. They are very deep and moderately well drained. Sassafras soils are very deep and have a loamy subsoil.

Of minor extent in this association are Beltsville, Chillum, Croom, Evesboro, Fallsington, and Woodstown soils and soils from the Piedmont Province. Beltsville soils have a fragipan between depths of 12 and 34 inches. They are very deep and somewhat poorly drained. Chillum soils do not contain as much sand and gravel as

the other soils. They are very deep and well drained. Croom soils are on interstream divides and knolls. They are very deep and well drained. They average more than 35 percent gravel throughout. Evesboro soils are on interstream divides and knolls. They are very deep and well drained. They average less than 35 percent gravel throughout. Fallsington soils are in drainage swales and on slightly concave flats on uplands. They are very deep and poorly drained. Woodstown soils are on slightly concave flats and in drainage swales on uplands. They are moderately well drained and very deep. They have a loamy subsoil. The soils from the Piedmont Province are intermingled with the major soils in small areas near I-95 and Routes 29, 100, and 32.

7. Codorus-Hatboro association

Nearly level, very deep, moderately well drained to poorly drained soils; formed in alluvial deposits

These soils are on nearly level flood plains in the central part of the Piedmont Province and the Atlantic Coastal Plain Province. Slopes range from 0 to 3 percent.

This association makes up about 4 percent of the survey area. It is 84 percent Codorus and Hatboro soils, 14 percent water areas, and 2 percent soils of minor extent.

Codorus soils are moderately well drained and are subject to occasional flooding. Hatboro soils are poorly drained and are subject to occasional flooding and ponding. Codorus and Hatboro soils have a loamy subsoil overlying a gravelly substratum.

Of minor extent in this association are Blocktown, Brinklow, and Manor soils. Blocktown soils are on very steep side slopes. They are shallow to bedrock and average more than 35 percent rock fragments throughout. Brinklow soils are on strongly sloping to very steep side slopes. They are moderately deep and have a loamy subsoil. Manor soils are in areas ranging from gently sloping summits and ridgetops to very steep side slopes that are adjacent to the flood plain. They have a loamy substratum that averages less than 18 percent clay throughout. They have a high content of mica and are very deep to bedrock.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff 1998, 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 4 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalf (*Ud*, meaning humid, plus *alf*, from Alfisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalf*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Detailed Soil Map Units

In this section, each soil series recognized in the survey area is described. Each description is followed by the detailed soil map unit or units associated with the series.

Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in the survey area is described. The detailed description of each soil horizon follows standards in the “Soil Survey Manual” (Soil Survey Division Staff 1993). Many of the technical terms used in the descriptions are defined in “Soil Taxonomy” (Soil Survey Staff 1999) and in “Keys to Soil Taxonomy” (Soil Survey Staff 1998). Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

The map units delineated on the detailed soil maps in this survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is given under the heading “Use and Management of the Soils.”

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most included soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure

taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Glenelg loam, 0 to 3 percent slopes, is a phase of the Glenelg series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Brinklow-Blocktown channery loams, 25 to 65 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Codorus and Hatboro silt loams, 0 to 3 percent slopes, is an undifferentiated group in this survey area.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Urban land is an example.

Table 5 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

Alloway Series

The Alloway series consists of very deep, moderately well drained soils on nearly level to sloping interstream divides of dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in silty and clayey eolian deposits. Permeability is slow. Slope ranges from 0 to 15 percent.

Alloway soils are commonly in areas adjacent to Hambrook, Sassafras, Russett, and Woodstown soils. Hambrook and Sassafras soils are well drained, have a fine-loamy particle-size control section, and are on the higher lying ridges and hillslopes. Russett and Woodstown soils are moderately well drained, have a fine-loamy particle-size control section, and are on landforms similar to those of the Alloway soils.

Typical Pedon

Alloway silt loam, 2 to 5 percent slopes, in a wooded area, in Anne Arundel County, Maryland; about 1,500 feet northeast of the intersection of Maryland Route 175

(Annapolis Road) and Maryland Route 174 (Reece Road), about 1,600 feet east of Route 175 and 700 feet north of Route 174; USGS Odenton topographic quadrangle; lat. 39 degrees 07 minutes 02 seconds N. and long. 76 degrees 42 minutes 55 seconds W., NAD 27.

Oi—0 to 2 inches; very dark brown (10YR 2/2), partially decomposed leaf litter.

A—2 to 3 inches; black (2.5Y 2.5/1) silt loam; weak fine granular structure; very friable; common medium and very fine roots throughout; extremely acid; clear wavy boundary.

BE—3 to 6 inches; light olive brown (2.5Y 5/4) silt loam; weak medium subangular blocky structure; friable; common fine, medium, and coarse roots throughout; common fine tubular pores; few medium faint olive (5Y 5/3) iron depletions on faces of peds; common medium distinct yellowish brown (10YR 5/4) iron accumulations as pore linings; 1 percent rounded quartzite gravel; extremely acid; clear smooth boundary.

Bt1—6 to 18 inches; yellowish brown (10YR 5/6) silty clay loam; moderate medium and coarse subangular blocky structure; friable; common fine roots between peds and common medium, coarse, and very coarse roots throughout; common fine tubular pores; common fine prominent red (2.5YR 4/6) iron accumulations as soft masses; extremely acid; gradual smooth boundary.

Bt2—18 to 29 inches; silty clay, 45 percent yellowish red (5YR 4/6) and 30 percent light reddish brown (5YR 6/3); moderate coarse prismatic structure parting to moderate medium angular blocky parting to weak very fine angular blocky; firm; common fine roots between peds; common fine vesicular and tubular pores; many continuous prominent light gray (5YR 7/1) clay films on faces of peds and in pores; common medium prominent very pale brown (10YR 7/3) iron depletions; few fine prominent brownish yellow (10YR 6/8) iron accumulations as weakly cemented plates; extremely acid; gradual wavy boundary.

Bt3—29 to 47 inches; reddish brown (5YR 4/4) silty clay; moderate coarse prismatic structure parting to moderate medium subangular blocky; firm; few fine roots between peds and few coarse roots throughout; many continuous distinct light gray (5YR 7/1) clay films on faces of peds and in pores; common medium prominent light gray (5YR 7/1) iron depletions between peds; very strongly acid; gradual smooth boundary.

Bt4—47 to 69 inches; reddish brown (5YR 5/3) silty clay loam; weak coarse prismatic structure; very firm; few discontinuous distinct light gray (5YR 7/1) clay films on faces of peds and in pores; few fine prominent yellowish red (5YR 5/8) iron accumulations as soft masses; common fine prominent pinkish gray (7.5YR 6/2) iron depletions; very strongly acid; gradual smooth boundary.

BC—69 to 75 inches; reddish brown (2.5YR 5/3) silt loam; weak coarse prismatic structure; very firm; extremely acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 60 to more than 72 inches. The depth to a seasonal high water table ranges from 20 to 40 inches from January to April. The depth to bedrock is more than 72 inches. The content of coarse fragments of predominantly quartzitic rounded gravel ranges from 0 to 15 percent, by volume, throughout the profile. In unlimed areas reaction ranges from strongly acid to extremely acid throughout the profile.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 2 or 3, and chroma of 1 or 2. The fine-earth fraction is sandy loam or silt loam.

The E horizon, if it occurs, has hue of 10YR, value of 5 or 6, and chroma of 3 to 6. The fine-earth fraction is silt loam.

The BE horizon has hue of 10YR, value of 5 or 6, and chroma of 3 to 6. The fine-earth fraction is silty clay loam or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or gray.

The Bt horizon has hue of 10R to 10YR, value of 3 to 6, and chroma of 3 to 8. The fine-earth fraction is silt loam, silty clay loam, clay loam, or clay. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or gray.

The BC or BCg horizon has hue of 2.5YR or 5YR or is neutral. It has value of 5 to 8 and chroma of 0 to 6. The fine-earth fraction is silty clay loam, silty clay, sandy clay, or clay. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or gray.

AwB—Alloway silt loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Alloway and similar soils

Composition: 85 percent
Landform: Divides
Slope: 2 to 5 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Silty and clayey fluviomarine sediments
Flooding: None
Available water capacity: Average of 11.34 inches
Note: In some areas the color of the soil is redder than that listed in the range in characteristics of the official series description.

Additional Components

Russett and similar soils

Composition: 15 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Baile Series

The Baile series consists of very deep, poorly drained soils in upland depressions, on footslopes, and in drainageways in the northern part of the Piedmont Province. These soils formed in local alluvium and colluvium over residuum derived from acid crystalline rocks. Permeability is slow or moderately slow. Slope ranges from 0 to 8 percent.

Baile soils are similar to Watchung soils and are adjacent to Codorus, Glenville, Glenelg, Hatboro, and Manor soils. The poorly drained Watchung soils formed in residuum derived from basic rocks, most commonly gabbro, diabase, and diorite. The well drained Glenelg and Manor soils are in associated areas on uplands. The poorly drained Codorus and moderately well drained Hatboro soils are on adjacent flood plains. The moderately well drained Glenville soils have a fragipan.

Typical Pedon

Baile silt loam, 0 to 8 percent slopes, in Frederick County, Maryland; 200 feet south of the intersection of Clover Road and Maryland Route 75, about 100 feet east of Maryland Route 75; in the Johnsville area; lat. 39 degrees 32 minutes 20 seconds N. and long. 77 degrees 13 minutes 47 seconds W., NAD 83.

A—0 to 2 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many fine roots throughout; common fine and medium prominent yellowish red (5YR 4/6) iron accumulations as concretions throughout; slightly acid; clear wavy boundary.

Ap1—2 to 7 inches; very dark grayish brown (10YR 3/2) silt loam; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; firm; many fine roots throughout; common fine and medium prominent dark brown (7.5YR 3/4) iron accumulations as soft masses throughout; common coarse prominent dark red (2.5YR 3/6) iron accumulations as concretions between peds; slightly acid; clear wavy boundary.

Ap2—7 to 11 inches; dark grayish brown (10YR 4/2) silt loam; moderate medium subangular blocky structure; firm; many very fine and common fine roots throughout; many fine vesicular pores; common fine faint grayish brown (10YR 5/2) iron depletions throughout; common fine prominent dark brown (7.5YR 3/4) iron accumulations as concretions throughout; 2 percent gravel; neutral; abrupt wavy boundary.

Ag—11 to 14 inches; gray (10YR 5/1) silt loam; weak coarse prismatic structure; friable; many fine roots throughout; many fine vesicular pores; many fine prominent dark reddish brown (5YR 3/3) iron and manganese accumulations as concretions throughout; common fine prominent strong brown (7.5YR 5/8) iron accumulations as soft masses throughout; 2 percent gravel; neutral; clear smooth boundary.

Btg—14 to 26 inches; silt loam, 60 percent greenish gray (5GY 6/1) and 30 percent yellowish brown (10YR 5/6); strong coarse prismatic structure parting to moderate medium subangular blocky; firm; many fine roots between peds; common fine tubular pores and common fine vesicular pores; common very coarse prominent grayish brown (10YR 5/2) iron depletions on faces of prisms; 10 percent gravel; neutral; clear irregular boundary.

BCg—26 to 41 inches; channery silt loam, 55 percent greenish gray (5GY 6/1) and 35 percent yellowish brown (10YR 5/6); weak coarse subangular blocky structure parting to weak fine platy; friable; common fine roots between peds; many fine vesicular pores; 15 percent subangular channers; neutral; clear wavy boundary.

Cg—41 to 51 inches; channery silt loam, 60 percent light olive gray (5Y 6/2) and 30 percent strong brown (7.5YR 4/6); massive parting to weak fine platy structure; friable; common fine vesicular pores; few continuous prominent dark reddish brown (5YR 3/2) organic coatings on faces of peds; 15 percent subangular channers; neutral; abrupt smooth boundary.

2Cg—51 to 56 inches; gravelly sandy clay loam, 55 percent grayish brown (10YR 5/2) and 35 percent yellowish brown (10YR 5/8); massive; friable; many fine vesicular pores; very few distinct patchy black (N 2.5/) and very few faint discontinuous

white (N 8/) organic coatings on faces of peds; 5 percent subangular quartzite gravel; neutral.

Range in Characteristics

The thickness of the solum ranges from 30 to 45 inches. The depth to bedrock is more than 60 inches. Reaction ranges from strongly acid to neutral. Redoximorphic features are within a depth of 56 inches.

The A horizon has hue of 10YR or 2.5Y, value of 2 to 5, and chroma of 1 to 4. The fine-earth fraction is loam or silt loam.

The Btg horizon has hue of 10YR to 5Y or is neutral. It has value of 4 to 6 and chroma of 0 to 2. Some pedons have hue greener or bluer than 5Y. The fine-earth fraction is silt loam, silty clay loam, clay loam, or loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or gray.

The C horizon, if it occurs, has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 3 to 6. The fine-earth fraction is silt loam, silty clay loam, clay loam, loam, or sandy clay loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or gray.

The Cg horizon, if it occurs, has hue of 7.5YR to 5Y, value of 3 to 6, and chroma of 2. In some pedons the hue is greener or bluer than 5Y. The fine-earth fraction is silt loam, silty clay loam, clay loam, loam, or sandy clay loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, yellow, or gray.

BaA—Baile silt loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Baile and similar soils

Composition: 85 percent
Landform: Swales, depressions, and drainageways
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 0.5 foot
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 11.1 inches

Additional Components

Glenville and similar soils

Composition: 15 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Benevola Series

The Benevola series consists of very deep, well drained soils on nearly level to strongly sloping uplands in valleys. These soils formed in residuum derived from marble. Permeability is moderate. Slope ranges from 0 to 15 percent.

Benevola soils are in areas adjacent to Glenelg, Glenville, Manor, and Wiltshire soils. Glenelg, Glenville, and Manor soils formed in residuum derived from micaceous phyllite and schist. They average less than 35 percent clay and are in the higher landscape positions. Wiltshire soils formed in local alluvium and colluvium derived from phyllite and schist over marble residuum. They have a fragipan and are moderately well drained.

Typical Pedon

Benevola silty clay loam, 3 to 8 percent slopes, in a field used for crops, in Frederick County, Maryland; northeast of Woodspring Meadows Subdivision; about 1,400 feet north of the intersection of Maryland Routes 144 and 75 and 1,300 feet east of Route 75; lat. 39 degrees 23 minutes 28 seconds N. and long. 77 degrees 15 minutes 08 seconds W., NAD 83.

Ap—0 to 8 inches; dark brown (7.5YR 3/3) silty clay loam; weak coarse subangular blocky structure parting to moderate fine granular; friable; many fine roots; slightly acid; abrupt smooth boundary.

Bt1—8 to 17 inches; brown (7.5YR 4/4) silty clay loam; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; friable; many fine and common medium roots; many fine vesicular and many medium tubular pores; few medium prominent reddish black (2.5YR 2/1) manganese or manganese and iron accumulations as soft masses on faces of peds and pore linings; few medium faint brown (7.5YR 4/3) organic coatings on faces of peds and in pores; 5 percent mixed igneous and metamorphic gravel; neutral; clear irregular boundary.

Bt2—17 to 33 inches; dark reddish brown (2.5YR 3/4) silty clay; weak coarse prismatic structure parting to moderate medium subangular blocky parting to strong fine angular blocky; friable; common medium roots; many fine and common medium vesicular and common medium tubular pores; few medium distinct dark reddish brown (5YR 3/4) clay films on faces of peds; few medium prominent black (N 2.5/) manganese or manganese and iron accumulations as soft masses on faces of peds and pore linings; 5 percent mixed igneous and metamorphic gravel; neutral; abrupt wavy boundary.

Bt3—33 to 41 inches; dark reddish brown (2.5YR 3/4) clay; moderate medium subangular blocky structure parting to strong fine angular blocky; friable; common fine roots; many fine tubular and common fine vesicular pores; common fine and medium prominent black (N 2.5/) iron and manganese accumulations as nodules; 10 percent mixed igneous and metamorphic gravel; neutral; clear wavy boundary.

Bt4—41 to 57 inches; yellowish red (5YR 4/6) clay; weak thick platy structure parting to moderate medium angular blocky parting to weak fine angular blocky; friable; common fine roots; many fine vesicular and tubular pores; few medium faint dark reddish brown (5YR 3/4) clay films on faces of peds; 1 percent mixed igneous and metamorphic gravel; slightly acid; clear irregular boundary.

C1—57 to 91 inches; reddish black (2.5YR 2/1) silt loam; weak thin platy structure; very friable; few prominent yellowish red (5YR 4/6) clay films on faces of peds; slightly acid; gradual smooth boundary.

C2—91 to 94 inches; black (N 2.5/) silt loam; massive; very friable; gradual smooth boundary.

C3—94 to 115 inches; black (5YR 2.5/1) silty clay loam; massive; very friable.

Range in Characteristics

The thickness of the solum ranges from 40 to 60 inches. The depth to bedrock is more than 5 feet. The content of marble rock fragments ranges from 0 to 25 percent, by volume, throughout. Reaction ranges from strongly acid to neutral.

The Ap horizon has hue of 5YR to 10YR, value of 3 or 4 (less than 5 when dry), and chroma of 2 to 4. The fine-earth fraction is silt loam, loam, clay loam, or silty clay loam.

The BE horizon, if it occurs, has hue of 5YR or 7.5YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is silt loam, loam, or silty clay loam.

The Bt horizon has hue of 2.5YR to 7.5YR, value of 3 to 5, and chroma of 3 to 6. The fine-earth fraction is clay, silty clay, clay loam, or silty clay loam. Redoximorphic features occur as manganese or iron and manganese masses in shades of black or reddish black.

The Btg horizon, if it occurs, has hue of 2.5YR to 7.5YR, value of 3 to 5, and chroma of 2. The fine-earth fraction is clay, silty clay, clay loam, or silty clay loam. Redoximorphic features occur as manganese or iron and manganese masses in shades of black or reddish black.

The C horizon, if it occurs, has hue of 2.5YR to 10YR, value of 2 to 6, and chroma of 3 to 6. The fine-earth fraction is loam, silt loam, clay loam, silty clay loam, or clay.

The Cg horizon, if it occurs, has hue of 2.5YR to 10YR or is neutral. It has value of 2 to 6 and chroma of 0 to 2. The fine-earth fraction is loam, silt loam, clay loam, silty clay loam, or clay.

BeA—Benevola silt loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Valley

Component Description

Benevola and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Clayey residuum derived from marble
Flooding: None
Available water capacity: Average of 8.7 inches

Additional Components

Wiltshire and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Glenelg and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

BeB—Benevola silt loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Valley

Component Description

Benevola and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Clayey residuum derived from marble
Flooding: None
Available water capacity: Average of 8.7 inches

Additional Components

Wiltshire and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Glenelg and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

BeC—Benevola silt loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Valley

Component Description

Benevola and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent

Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Clayey residuum derived from marble
Flooding: None
Available water capacity: Average of 8.7 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Brinklow Series

The Brinklow series consists of moderately deep, well drained soils on broad ridgetops and side slopes in the uplands on the Piedmont Province. These soils formed in material weathered from acid crystalline rocks. Permeability is moderately slow. Slope ranges from 8 to 35 percent.

Brinklow soils are similar to Bannertown soils and in areas adjacent to Blocktown, Codorus, Glenelg, Glenville, Hatboro, Manor, and Occoquan soils. The moderately deep Bannertown soils formed in residuum derived from felsic crystalline rock, mostly granites. The shallow Blocktown soils formed in material derived from phyllite and schist. The moderately well drained Codorus and poorly drained Hatboro soils are on active flood plains. They are very deep. The moderately well drained Glenville soils have a fragipan and are in upland drainage swales. The very deep, well drained Glenelg and Manor soils are on nearby landscapes. The well drained Occoquan soils are deep.

Typical Pedon

Brinklow channery silt loam, in an area of Brinklow-Blocktown channery silt loams, 3 to 8 percent slopes, in Montgomery County, Maryland; 2 miles northwest of Laytonsville; about 1.5 miles west on Rocky Road from its intersection with Maryland Route 108 and 600 feet north.

Ap—0 to 10 inches; brown (7.5YR 5/4) channery silt loam; weak fine granular structure; friable; common fine roots; 15 percent channers; slightly acid; abrupt smooth boundary.

Bt—10 to 19 inches; strong brown (7.5YR 5/8) channery silt loam; moderate medium subangular blocky structure; friable; few fine roots; common fine tubular pores; many prominent clay films on faces of peds and pore linings; 20 percent channers; moderately acid; clear wavy boundary.

BC—19 to 25 inches; variegated strong brown (7.5YR 5/8), reddish yellow (7.5YR 7/6), and yellowish red (5YR 5/6) channery loam; moderate medium and fine subangular blocky structure; friable; common fine tubular pores; 30 percent channers; moderately acid; abrupt wavy boundary.

Cr—25 to 35 inches; reddish yellow (5YR 7/6) moderately cemented bedrock that crushes to very channery loam; platy structure; firm; 40 percent channers, 45 percent parachanners; moderately acid; abrupt wavy boundary.
R—35 inches; indurated, highly fractured phyllite bedrock.

Range in Characteristics

The thickness of the solum and the depth to paralithic contact range from 20 to 40 inches. The depth to indurated bedrock ranges from 30 to 60 inches. The content of veined quartz and phyllite fragments ranges from 5 to 35 percent, by volume, in the A and B horizons and from 35 to 50 percent, by volume, in the C horizon. In unlimed areas reaction ranges from very strongly acid to moderately acid.

The A horizon has hue of 2.5YR to 10YR, value of 3 to 5, and chroma of 2 to 6. The fine-earth fraction is silt loam or loam.

The B horizon has hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 4 to 8. The fine-earth fraction is loam, silt loam, or silty clay loam.

The C horizon has hue of 7.5YR or 10YR, value of 4 to 7, and chroma of 4 to 8. The fine-earth fraction is loam or silt loam.

The Cr horizon is extremely firm in place but is well weathered phyllite that can be penetrated by handtools.

BrC—Brinklow channery loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Brinklow and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent
Texture of the surface layer: Channery loam
Depth to a restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly residuum derived from low base phyllites and schists
Flooding: None
Available water capacity: Average of 4.1 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

BrD—Brinklow channery loam, 15 to 25 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Brinklow and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 15 to 25 percent
Texture of the surface layer: Channery loam
Depth to a restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly residuum derived from low base phyllites and schists
Flooding: None
Available water capacity: Average of 4.1 inches

Additional Components

Occoquan and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Blocktown Series

The Blocktown series consists of shallow, well drained soils on uplands of the Piedmont Province. These soils formed in material weathered from phyllite and schist. Permeability is moderate. Slope ranges from 3 to 65 percent.

Blocktown soils are in areas adjacent to Brinklow, Codorus, Glenelg, Glenville, Hatboro, Manor, and Occoquan soils. Brinklow soils have bedrock at a depth of more than 20 inches and average less than 35 percent rock fragments throughout. Codorus and Hatboro soils are on active flood plains, are moderately well drained and poorly drained, respectively, and are very deep. Glenville soils have a fragipan, are moderately well drained, and are in upland drainage swales. Glenelg and Manor soils are very deep, well drained, and on nearby landscapes. Occoquan soils are deep and well drained.

Typical Pedon

Blocktown channery silt loam, 3 to 8 percent slopes, in Montgomery County, Maryland; about 1 mile south of Woodfield; 1,510 feet north on Log House Road from its intersection with Watkins Road, and 2,265 feet east.

Ap—0 to 6 inches; yellowish red (5YR 4/6) channery silt loam; moderate medium granular structure; friable; many fine roots; 30 percent channers; slightly acid; abrupt smooth boundary.

Bt—6 to 17 inches; red (2.5YR 4/6) extremely channery silt loam; weak medium granular structure; friable; few fine roots; many prominent clay films on faces of peds; 65 percent channers; slightly acid; abrupt wavy boundary.
Cr—17 to 21 inches; variegated red (2.5YR 4/6) and yellowish red (5YR 5/6) moderately cemented bedrock that crushes to extremely channery silt loam; inherited rock structure; firm; 40 percent channers and 50 percent parachanners; strongly acid; clear wavy boundary.
R—21 inches; indurated, highly fractured phyllite bedrock.

Range in Characteristics

The depth to the Cr horizon ranges from 10 to 20 inches. The depth to rigid bedrock ranges from 20 to 40 inches. The content of rock fragments ranges from 15 to 50 percent, by volume, in the A horizon and from 35 to 90 percent, by volume, in the B and C horizons. In unlimed areas reaction is moderately acid or slightly acid.

The A horizon has hue of 2.5YR to 7.5YR, value of 3 to 5, and chroma of 4 to 6. The fine-earth fraction is silt loam or loam.

The B horizon has hue of 10R to 7.5YR, value of 3 to 5, and chroma of 3 to 8. The fine-earth fraction is silt loam, loam, or silty clay loam.

The C horizon, if it occurs, has hue of 2.5YR to 7.5YR, value of 3 to 5, and chroma of 4 to 8. The fine-earth fraction is silt loam or loam.

The Cr horizon has variegated colors. It is moderately cemented but can be penetrated by handtools.

The R horizon cannot be dug with handtools.

BtF—Brinklow-Blocktown channery loams, 25 to 65 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Brinklow and similar soils

Composition: 50 percent
Landform: Summits and backslopes
Slope: 25 to 65 percent
Texture of the surface layer: Channery loam
Depth to a restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly residuum derived from low base phyllites and schists
Flooding: None
Available water capacity: Average of 4.1 inches

Blocktown and similar soils

Composition: 40 percent
Slope: 25 to 65 percent
Texture of the surface layer: Channery loam
Depth to a restrictive feature: 10 to 20 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly residuum derived from low base phyllites and schists

Flooding: None
Available water capacity: Average of 1.4 inches

Additional Components

Manor and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Chillum Series

The Chillum series consists of very deep, well drained soils on interstream divides, knolls, and pediments and in ravines of dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in silty eolian deposits over gravelly fluviomarine sediments. Permeability is moderate. Slope ranges from 0 to 15 percent.

Chillum soils are in areas adjacent to Beltsville, Croom, Downer, Fallsington, Hammonton, Russett, Sassafras, and Woodstown soils. Beltsville soils are moderately well drained, have a fragipan, and are on landforms similar to those of the Chillum soils. Croom soils average more than 35 percent rock fragments throughout. Downer and Hammonton soils average less than 18 percent clay throughout. Fallsington soils are poorly drained, and Russett and Woodstown soils are moderately well drained. Sassafras soils average more than 15 percent sand throughout.

Typical Pedon

Chillum loam, on a 7 percent slope, in a wooded area, in Anne Arundel County, Maryland; about 2.3 miles northeast of Laurel; 4,300 feet northeast of the intersection of Brock Bridge Road and Whiskey Bottom Road, 6,600 feet north of the intersection of Maryland Route 198 (Ft. Meade Road) and Whiskey Bottom Road, and 400 feet south of Brock Bridge Road; USGS Laurel topographic quadrangle; lat. 39 degrees 07 minutes 06 seconds N. and long. 76 degrees 48 minutes 57 seconds W., NAD 83.

Oi—0 to 1 inch; partially decomposed leaf litter.

A—1 to 2.5 inches; very dark gray (10YR 3/1) loam; weak fine granular structure; friable; many fine and medium roots; 10 percent gravel; extremely acid; clear wavy boundary.

E—2.5 to 8.5 inches; dark yellowish brown (10YR 4/4) gravelly loam; common coarse distinct very dark gray (10YR 3/1) mottles; weak fine and medium subangular blocky structure; friable; many fine and medium roots; common medium vesicular and tubular pores; few fine distinct yellowish brown (10YR 5/6) iron accumulations as soft masses; 15 percent gravel; very strongly acid; abrupt smooth boundary.

Bt1—8.5 to 12 inches; strong brown (7.5YR 5/6) gravelly loam; moderate medium subangular blocky structure; friable; common fine and medium roots; common fine vesicular and many fine and common coarse tubular pores; few fine distinct yellowish red (5YR 5/6) iron accumulations as soft masses; few discontinuous clay films on faces of peds; 25 percent gravel; very strongly acid; clear wavy boundary.

Bt2—12 to 24 inches; yellowish red (5YR 4/6) clay loam; weak thick platy structure parting to moderate medium subangular blocky; firm; common fine roots; few fine vesicular pores; common medium distinct brown (7.5YR 4/4) and few fine distinct strong brown (7.5YR 4/6) iron accumulations as soft masses; 5 percent gravel; extremely acid; abrupt wavy boundary.
2BC—24 to 34 inches; strong brown (7.5YR 4/6) loamy sand; massive; friable to firm; 3 percent gravel; extremely acid; abrupt smooth boundary.
3C—34 to 46 inches; yellowish red (5YR 4/6) gravelly silty clay loam; firm; extremely acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 20 to 40 inches. The depth to a seasonal high water table is more than 72 inches. The content of coarse fragments of rounded gravel and cobbles ranges from 0 to 60 percent, by volume, in the surface and subsurface horizons; from 0 to less than 1 percent, by volume, in the subsoil; and from 10 to 80 percent, by volume, in the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid throughout the profile.

The Ap horizon has hue of 10YR, value of 3 or 4, and chroma of 1 to 3. The fine-earth fraction is loam or silt loam.

The E horizon, if it occurs, has hue of 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is loam or silt loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6. The fine-earth fraction is loam, silt loam, or clay loam.

The 2BC horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction is sand, loamy sand, sandy loam, loam, sandy clay loam, or clay loam. This horizon may be stratified.

The 2C or 3C horizon, if it occurs, has hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 6. The fine-earth fraction ranges from sand to clay loam.

CeB—Chillum loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Chillum and similar soils

Composition: 85 percent
Landform: Divides
Slope: 2 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Silty eolian deposits over gravelly fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.63 inches
Note: In some areas the soil is more than 15 percent fine sand or coarser material.

Additional Components

Beltsville and similar soils

Composition: 10 percent
Landform: Divides

Sassafras and similar soils

Composition: 5 percent
Landform: Divides, terraces, and ravines

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

CeC—Chillum loam, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Chillum and similar soils

Composition: 85 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Silty eolian deposits over gravelly fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.63 inches
Note: In some areas the soil contains more than 15 percent fine sands or coarser material.

Additional Components

Evesboro and similar soils

Composition: 10 percent
Landform: Divides

Croom and similar soils

Composition: 5 percent
Landform: Divides and ravines

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

Russett Series

The Russett series consists of very deep, moderately well drained soils on interstream divides of dissected coastal plains. These soils formed in loamy fluviomarine sediments. Permeability is moderately slow or slow. Slope ranges from 0 to 15 percent.

Russett soils are commonly in areas adjacent to Alloway, Chillum, Downer, Evesboro, Patapsco, Fallsington, and Sassafras soils. Alloway soils do not have sandy lenses or a 20 percent decrease in clay content from the maximum within 60 inches of the surface. Chillum, Downer, Evesboro, Patapsco, and Sassafras soils are well drained. Fallsington soils are poorly drained and are in the lower landscape positions.

Typical Pedon

Russett fine sandy loam, on a 3 percent slope, in a wooded area, in Anne Arundel County, Maryland; about 1,200 feet northeast of the intersection of Maryland Route 174 (Reece Road) and Maryland Route 175 (Annapolis Road), 1,200 feet east of Route 175 and 600 feet north of Route 174; USGS Odenton NW topographic quadrangle; lat. 39 degrees 06 minutes 58 seconds N. and long. 76 degrees 42 minutes 58 seconds W., NAD 27.

A—0 to 4 inches; very dark gray (10YR 3/1) fine sandy loam; weak coarse granular structure; very friable; common fine, medium, and coarse roots throughout; extremely acid; abrupt smooth boundary.

Bt1—4 to 7 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; very friable; few coarse and very coarse roots throughout; few very coarse and extremely coarse prominent reddish black (2.5YR 2.5/1) iron accumulations as hard platelike ironstone concretions throughout; extremely acid; gradual smooth boundary.

Bt2—7 to 13 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; friable; few fine and medium roots throughout; few fine tubular pores; few very coarse and extremely coarse prominent reddish black (2.5YR 2.5/1) iron accumulations as hard platelike ironstone concretions throughout; few distinct yellowish brown (10YR 5/6) clay films on faces of peds; extremely acid; gradual wavy boundary.

Bt3—13 to 19 inches; yellowish brown (10YR 5/8) sandy clay loam; moderate coarse angular blocky structure; friable; nonsticky; moderately plastic; few fine and medium roots throughout; few fine tubular pores throughout; many prominent clay films on faces of peds; common prominent black (N 2.5/) manganese coatings on faces of peds; few very coarse and extremely coarse prominent reddish black (2.5YR 2.5/1) hard platy iron cemented nodules throughout; extremely acid; clear wavy boundary.

Bt4—19 to 26 inches; yellowish brown (10YR 5/8) sandy clay loam; weak and moderate medium subangular blocky structure; very friable; nonsticky; moderately plastic; few fine and medium roots throughout; many prominent clay films on faces of peds; common prominent black (N 2.5/) manganese coatings on faces of peds; common very coarse and extremely coarse prominent red (2.5YR 5/8) irregular iron masses throughout; 1 percent rounded mixed gravel; very strongly acid; clear wavy boundary.

Bt5—26 to 46 inches; sandy clay loam and silty clay loam, 40 percent yellowish brown (10YR 5/8), 30 percent red (2.5YR 5/8), 20 percent light gray (5Y 7/1), and 10 percent yellowish brown (10YR 5/4); 50 percent silty clay loam with strong coarse prismatic structure parting to strong medium angular blocky and 50 percent sandy clay loam with weak fine subangular blocky structure; friable; nonsticky; slightly plastic; few fine roots throughout; few prominent yellowish brown (10YR 5/8) clay films on faces of peds; very strongly acid; abrupt wavy boundary.

Btg/BCg—46 to 57 inches; 60 percent clay loam (Btg part) and 40 percent sandy loam (BCg part), light gray (10YR 7/1); weak coarse prismatic structure parting to weak medium angular blocky; friable; few fine and medium roots throughout; many medium distinct grayish brown (10YR 5/2) iron depletions throughout; common

coarse and very coarse prominent strong brown (7.5YR 4/6) and common medium and coarse distinct yellow (10YR 7/8) irregular iron masses throughout; few prominent yellowish brown (10YR 5/8) clay films on faces of peds (Btg part); extremely acid; clear wavy boundary.

Cg—57 to 77 inches; grayish brown (10YR 5/2) loam; massive; friable; few fine and medium roots throughout; many coarse and very coarse distinct yellowish brown (10YR 5/6) irregular iron masses; common medium and coarse faint light gray (10YR 7/2) irregular clay depletions throughout; extremely acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 26 to more than 72 inches. The depth to a seasonal high water table generally ranges from 20 to 40 inches from December to April. The content of coarse fragments of angular ironstone channers and rounded quartzitic and mixed gravel ranges from 0 to 15 percent, by volume, in the subsoil and substratum, but generally there are no coarse fragments in the subsoil and substratum. In unlimed areas reaction ranges from strongly acid to extremely acid.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 4. The fine-earth fraction is loamy sand, sandy loam, fine sandy loam, loam, or silt loam.

The E horizon, if it occurs, has hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 3 to 6. The fine-earth fraction is loamy sand, sandy loam, or loam.

The BE horizon, if it occurs, has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6. The fine-earth fraction is loamy sand, sandy loam, or loam.

The Bt horizon has hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is sandy loam, loam, sandy clay loam, clay loam, or silty clay loam. Redoximorphic features occur as iron masses in shades of red, brown, or yellow and iron depletions in shades of gray or olive.

The Btg horizon, if it occurs, is below a depth of 20 inches. It has hue of 5YR to 2.5Y, value of 6 or 7, and chroma of 1 or 2. The fine-earth fraction is sandy loam, loam, sandy clay loam, clay loam, or silty clay loam. Redoximorphic features occur as iron masses in shades of red, brown, or yellow and iron depletions in shades of gray or olive.

The BC or BCg horizon, if it occurs, has hue of 5YR to 2.5Y, value of 4 to 8, and chroma of 1 to 8 or is neutral with value of 4 to 8. The fine-earth fraction is sandy clay loam, clay loam, or silty clay loam with lenses of loamy sand or sandy loam. Redoximorphic features occur as iron masses in shades of red, brown, or yellow and iron depletions in shades of gray or olive.

The C or Cg horizon, if it occurs, has hue of 2.5YR to 5Y, value of 4 to 8, and chroma of 1 to 8. The fine-earth fraction ranges from sand to clay. In many pedons this horizon has sandy lenses of varying thickness within the layers of sandy clay loam, silty clay loam, silty clay, or clay.

ChB—Chillum-Russett loams, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Note: Soils formed in residuum are within a depth of 40 inches in some areas of this map unit.

Component Description

Chillum and similar soils

Composition: 55 percent

Landform: Divides
Slope: 2 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Silty eolian deposits over gravelly fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.63 inches

Russett and similar soils

Composition: 35 percent
Landform: Divides
Slope: 2 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.5 inches

Additional Components

Sassafras and similar soils

Composition: 10 percent
Landform: Divides, terraces, and ravines

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

ChC—Chillum-Russett loams, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: Soils formed in residuum are within a depth of 40 inches in some areas of this map unit.

Component Description

Chillum and similar soils

Composition: 55 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Silty eolian deposits over gravelly fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.63 inches

Russett and similar soils

Composition: 35 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.5 inches

Additional Components

Sassafras and similar soils

Composition: 10 percent
Landform: Divides, terraces, and ravines

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Codorus Series

The Codorus series consists of very deep, moderately well drained soils on nearly level, active flood plains. These soils formed in recently deposited alluvium derived from metamorphic and crystalline rocks. Permeability is moderate. Slope ranges from 0 to 3 percent.

Codorus soils are in areas adjacent to Glenelg, Glenville, Manor, and Hatboro soils. Glenelg and Manor soils are on adjacent uplands and are well drained. Hatboro soils are on nearby flood plains and are poorly drained. Glenville soils have a fragipan.

Typical Pedon

Codorus silt loam, 0 to 3 percent slopes, in Jefferson County, West Virginia; about 1,000 feet north of Frog Eye Road and about 75 feet west of Israel Creek, south of Brownsville; lat. 39 degrees 21 minutes 58 seconds N. and long. 77 degrees 40 minutes 44 seconds W., NAD 83.

Ap—0 to 7 inches; brown (10YR 4/3) silt loam; weak medium subangular blocky structure parting to weak fine granular; friable; many fine and few medium roots; neutral; abrupt smooth boundary.

Bw1—7 to 16 inches; dark yellowish brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; many fine roots; many fine and common medium tubular and few medium vesicular pores; neutral; clear smooth boundary.

Bw2—16 to 22 inches; yellowish brown (10YR 5/4) loam; moderate medium subangular blocky structure; friable; common fine roots; few medium tubular and many fine tubular and vesicular pores; 5 percent gravel; slightly acid; clear smooth boundary.

Bg—22 to 29 inches; grayish brown (10YR 5/2) loam; weak coarse subangular blocky structure; friable; common fine and few coarse roots; many fine and common

medium tubular and vesicular pores; common medium prominent reddish brown (5YR 5/4) iron accumulations as soft masses; few fine and medium distinct dark gray (10YR 4/1) organic coatings in pores and on faces of peds; 5 percent gravel; slightly acid; clear smooth boundary.

C1—29 to 34 inches; brown (10YR 4/3) loam; massive; friable; few fine roots; common medium and many fine tubular and vesicular pores; common fine distinct yellowish brown (10YR 5/4) iron accumulations as soft masses; 5 percent gravel; slightly acid; clear smooth boundary.

C2—34 to 40 inches; brown (10YR 4/3) very gravelly loamy sand; massive to single grain; very friable; many medium prominent black (N 2.5/) iron and manganese accumulations as concretions; 40 percent gravel; slightly acid; clear smooth boundary.

C3—40 to 72 inches; yellowish brown (10YR 5/4) very gravelly loamy coarse sand; single grain; very friable; 50 percent gravel; slightly acid.

Range in Characteristics

The thickness of the solum ranges from 20 to 40 inches. The depth to bedrock is more than 72 inches. The depth to sand and stratified material is 30 inches or more. The content of coarse fragments ranges from 0 to 15 percent, by volume, in the solum; from 0 to 25 percent, by volume, in the substratum above a depth of 30 inches; and from 15 to 70 percent, by volume, in the substratum below a depth of 30 inches. In limed areas reaction ranges from neutral to moderately acid.

The Ap horizon has hue of 10YR, value of 3 to 6, and chroma of 2 or 3. The fine-earth fraction is silt loam or loam.

The B horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 or 4. The fine-earth fraction is silt loam, clay loam, loam, or silty clay loam. Some pedons have a Bg horizon with chroma of 1 or 2 in the lower part of the solum.

The C horizon has hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 1 to 4. The fine-earth fraction is silt loam, clay loam, loam, or silty clay loam. In some pedons the C horizon contains stratified sand and gravel below a depth of 40 inches.

Hatboro Series

The Hatboro series consists of very deep, poorly drained soils on nearly level flood plains. These soils formed in recent alluvium eroded from upland soils formed in material derived from mica and phyllite. Permeability is moderate. Slope ranges from 0 to 3 percent.

Hatboro soils are commonly in areas adjacent to Codorus, Baile, Glenelg, Glenville, and Manor soils. Codorus soils are on associated flood plains and are moderately well drained. Baile, Glenelg, Glenville, and Manor soils are on nearby uplands. Glenelg and Manor soils are well drained. Baile soils have an argillic horizon. Glenville soils are moderately well drained and have a fragipan.

Typical Pedon

Hatboro silt loam, 0 to 3 percent slopes, in Washington County, Maryland; about 1,000 feet west of Maryland Route 67 and 0.5 mile south of the hamlet of Brownsville; lat. 39 degrees 22 minutes 27 seconds N. and long. 77 degrees 40 minutes 17 seconds W., NAD 83.

Ap—0 to 8 inches; brown (10YR 4/3) silt loam; strong fine granular structure; friable; many fine roots; many fine distinct grayish brown (2.5Y 5/2) iron depletions; many fine prominent yellowish red (5YR 4/6) iron accumulations as soft masses; many fine prominent yellowish red (5YR 5/8) iron accumulations as oxidized

rhizospheres and pore linings; 4 percent gravel; slightly acid; clear smooth boundary.

Bg1—8 to 17 inches; grayish brown (2.5Y 5/2) silt loam; moderate medium subangular blocky structure; friable; many fine roots; common fine and few medium vesicular and many fine and few medium tubular pores; many medium prominent strong brown (7.5YR 5/8) iron accumulations as oxidized rhizospheres and pore linings; many medium prominent yellowish red (5YR 4/6) iron accumulations as soft masses; 2 percent gravel; neutral; clear smooth boundary.

Bg2—17 to 30 inches; light gray (2.5Y 7/2) silt loam; common coarse prominent reddish yellow (7.5YR 6/8) mottles; moderate medium subangular blocky structure; friable; many fine roots; many fine and few medium tubular and common fine and few medium vesicular pores; common fine prominent dark grayish brown (10YR 4/2) organic material in pores; many medium prominent strong brown (7.5YR 5/6) iron accumulations as soft masses; black (N 2.5/) iron and manganese accumulations on faces of peds; 10 percent gravel comprised of quartzite, greenstone, and quartz; neutral; clear smooth boundary.

Bg3—30 to 39 inches; gray (2.5Y 6/1) gravelly clay loam; common fine faint light yellowish brown (2.5Y 6/4) mottles; weak medium subangular blocky structure; firm; few fine roots; common fine tubular pores; many medium prominent yellowish red (5YR 4/6) iron and manganese accumulations as soft masses; many medium prominent black (N 2.5/) iron and manganese accumulations on faces of peds; common coarse prominent brownish yellow (10YR 6/8) iron accumulations as soft masses; 20 percent gravel comprised of quartzite, greenstone, and quartz; neutral; clear wavy boundary.

C1—39 to 42 inches; yellowish brown (10YR 5/6) gravelly sandy clay loam; massive; friable; few fine roots; many fine tubular and common medium vesicular pores; many medium prominent gray (2.5Y 6/2) iron depletions; common medium prominent black (N 2/) iron and manganese accumulations as soft masses; 30 percent mixed gravel; neutral; clear wavy boundary.

C2—42 to 50 inches; yellowish brown (10YR 5/6) gravelly sandy clay loam; massive; friable; 30 percent gravel comprised of quartzite, greenstone, phyllite, and quartz; neutral; abrupt wavy boundary.

C3—50 to 72 inches; yellowish brown (10YR 5/4) very gravelly sandy loam; single grain; very friable; 40 percent gravel comprised of quartzite, greenstone, phyllite, and quartz; slightly acid.

Range in Characteristics

The thickness of the solum ranges from 30 to 40 inches. The depth to bedrock is more than 5 feet. The content of gravel and cobbles ranges from 0 to 10 percent, by volume, in the solum and from 0 to 60 percent, by volume, in the C horizon. Some pedons have individual horizons within a depth of 40 inches where the content of rock fragments, on average, is more than 30 percent. Other pedons have mica flakes in the lower part of the profile. Reaction ranges from moderately acid to neutral.

The A horizon has hue of 10YR, value of 3 or 4, and chroma of 2 or 3. The fine-earth fraction is silt loam or loam.

The Bg horizon has hue of 10YR to 5Y or is neutral. It has value of 4 to 7 and chroma of 0 to 2. The fine-earth fraction is silt loam, clay loam, silty clay loam, sandy clay loam, or loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown; as iron and manganese masses in shades of black or reddish black; and as iron depletions in shades of brown, yellow, or gray.

The C horizon, if it occurs, has variegated hues of 10YR to 5Y or is neutral. It has value of 4 to 7 and chroma of 0 to 6. The fine-earth fraction is sandy clay loam, sandy loam, clay loam, silty clay loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown; as iron and manganese masses in

shades of black or reddish black; and as iron depletions in shades of brown, yellow, or gray.

The Cg horizon, if it occurs, has variegated hues of 10YR to 5Y or is neutral. It has value of 4 to 7 and chroma of 0 to 2. The fine-earth fraction is sandy clay loam, sandy loam, clay loam, silty clay loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown; as iron and manganese masses in shades of black or reddish black; and as iron depletions in shades of brown, yellow, or gray.

Co—Codorus and Hatboro silt loams, 0 to 3 percent slopes

Map Unit Setting

Landscape: River valley
Note: In some areas a layer of gravel is within a depth of 40 inches.

Component Description

Codorus and similar soils

Composition: 50 percent
Landform: Flood plains
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Occasional
Available water capacity: Average of 9.0 inches

Hatboro and similar soils

Composition: 35 percent
Landform: Flood plains
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 0.5 foot
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Frequent
Available water capacity: Average of 9.53 inches

Additional Components

Glenville and similar soils

Composition: 15 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Cp—Codorus and Hatboro soils, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

Landscape: River valley
Note: In some areas a layer of gravel is within a depth of 40 inches.

Component Description

Codorus and similar soils

Composition: 50 percent
Landform: Flood plains
Slope: 0 to 2 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Occasional
Available water capacity: Average of 9.0 inches

Hatboro and similar soils

Composition: 35 percent
Landform: Flood plains
Slope: 0 to 2 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 0.5 foot
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Frequent
Available water capacity: Average of 9.53 inches

Additional Components

Glenville and similar soils

Composition: 15 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Croom Series

The Croom series consists of very deep, well drained soils on interstream divides, knolls, and pediments and in ravines of dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in gravelly fluviomarine

sediments. Permeability is moderate or moderately rapid. Slope ranges from 0 to 60 percent.

Croom soils are commonly in areas adjacent to Beltsville, Chillum, Downer, Fallsington, Hammonton, Russett, Sassafras, and Woodstown soils. Beltsville soils are moderately well drained and have a fragipan. Chillum, Downer, Hammonton, and Sassafras soils average less than 35 percent rock fragments throughout. Fallsington soils are poorly drained, and Russett and Woodstown soils are moderately well drained.

Typical Pedon

Croom extremely gravelly sandy loam, on a 19 percent slope, in a wooded area, in Prince George's County, Maryland; about 0.7 mile southwest of Cheltenham; 3,500 feet west-southwest of the intersection of U.S. Route 301 (Robert Crain Highway) and Frank Tippett Road, 1,950 feet northwest of Route 301; USGS Brandywine topographic quadrangle; lat. 38 degrees 44 minutes 01 second N. and long. 76 degrees 45 minutes 50 seconds W., NAD 27.

A—0 to 3 inches; dark grayish brown (2.5Y 4/2) extremely gravelly sandy loam; weak fine granular structure; friable; common fine roots throughout; 65 percent well rounded mixed gravel; strongly acid; clear smooth boundary.

Bt1—3 to 15 inches; light olive brown (2.5Y 5/4) very gravelly sandy loam; weak very coarse prismatic structure; firm; common fine and medium roots between peds; few distinct light olive brown (2.5Y 5/4) clay films on rock fragments; 50 percent well rounded mixed gravel; strongly acid; clear wavy boundary.

Bt2—15 to 31 inches; yellowish brown (10YR 5/6) gravelly sandy loam; weak very coarse prismatic structure; very firm; few distinct yellowish brown (10YR 5/6) clay films on rock fragments; 25 percent well rounded mixed gravel; strongly acid; diffuse smooth boundary.

BC1—31 to 39 inches; yellowish brown (10YR 5/6) very gravelly loamy coarse sand; massive; firm; 55 percent well rounded mixed gravel; strongly acid; gradual wavy boundary.

BC2—39 to 72 inches; olive yellow (2.5Y 6/6) extremely gravelly coarse sand; single grain; firm; 75 percent well rounded mixed gravel; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon is 30 to more than 60 inches. The depth to a seasonal high water table is more than 72 inches. The content of coarse fragments of predominantly quartzitic gravel ranges from 35 to 70 percent, by volume, in the surface layer; from 50 to 70 percent, by volume, in the upper part of the subsoil; and from 15 to 90 percent, by volume, in the lower part of the subsoil and in the substratum. In unlimed areas reaction is very strongly acid or extremely acid throughout the profile.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 to 4. The fine-earth fraction is loamy sand, sandy loam, or loam.

The E horizon, if it occurs, has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4. The fine-earth fraction is loamy sand, sandy loam, or loam.

The Bt horizon has hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is loamy sand, sandy loam, sandy clay loam, loam, or clay loam.

The BC horizon, if it occurs, has hue of 5YR to 2.5Y, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction is sand, coarse sand, loamy sand, loamy coarse sand, sandy loam, loam, sandy clay loam, or clay loam. The BC horizon may be stratified.

The C horizon, if it occurs, has hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 6. The fine-earth fraction is sand, loamy sand, or sandy loam.

Evesboro Series

The Evesboro series consists of very deep, excessively drained soils on uplands and stream terraces in the northern part of the Atlantic Coastal Plain Province. These soils formed in sandy eolian deposits or fluviomarine sediments or in a combination of both. Permeability is rapid. Slope ranges from 0 to 25 percent.

Evesboro soils are in areas adjacent to Beltsville, Chillum, Croom, Downer, Fallsington, Hammonton, Russett, Sassafras, and Woodstown soils. Beltsville soils are moderately well drained and have a fragipan. Croom soils average more than 35 percent rock fragments throughout. Chillum, Downer, Hammonton, and Sassafras soils have an argillic horizon. Fallsington soils are poorly drained, and Russett and Woodstown soils are moderately well drained.

Typical Pedon

Evesboro loamy sand, 0 to 5 percent slopes, in a wooded area, in Anne Arundel County, Maryland; about 0.4 mile south of Paradise Beach; 1,500 feet north of the intersection of Bayside Beach Road and Paradise Beach Road, about 200 feet west of Paradise Beach Road; USGS Sparrows Point topographic quadrangle; lat. 39 degrees 08 minutes 34 seconds N. and long. 76 degrees 28 minutes 10 seconds W., NAD 27.

A—0 to 2 inches; dark gray (10YR 4/1) loamy sand; single grain; loose; common medium and many very fine and fine roots throughout; extremely acid; abrupt wavy boundary.

E—2 to 12 inches; brownish yellow (10YR 6/6) loamy sand; weak fine subangular blocky structure; loose; few medium and common very fine and fine roots throughout; very strongly acid; gradual wavy boundary.

BE—12 to 22 inches; yellowish brown (10YR 5/6) loamy sand; weak medium subangular blocky structure; loose; few medium and many very fine and fine roots throughout; very strongly acid; clear wavy boundary.

Bw—22 to 31 inches; dark yellowish brown (10YR 4/4) loamy sand; moderate medium subangular blocky structure; very friable; few very fine and fine roots throughout; very strongly acid; clear wavy boundary.

BC—31 to 39 inches; yellowish brown (10YR 5/6) loamy sand; weak medium subangular blocky structure; loose; few fine roots throughout; very strongly acid; gradual wavy boundary.

E' and Bt—39 to 73 inches; brownish yellow (10YR 6/6) sand (E' part); lamellae of brown (10YR 4/3) loamy sand (Bt part); single grain; loose; common faint clay bridges between sand grains; few fine roots throughout; very strongly acid.

Range in Characteristics

The thickness of the solum ranges from 24 to 48 inches. The content of gravel ranges from 0 to 25 percent, by volume, throughout the profile. In unlimed areas reaction ranges from extremely acid to strongly acid.

The A horizon has hue of 10YR, value of 3 to 5, and chroma of 1 to 4. The fine-earth fraction is sand or loamy sand.

The E horizon has hue of 10YR, value of 5 or 6, and chroma of 3 to 6. The fine-earth fraction is sand or loamy sand.

The Bw horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is sand or loamy sand.

The BC and C horizons, if they occur, have hue of 7.5YR or 10YR, value of 5 to 7, and chroma of 3 to 6. The fine-earth fraction is sand or loamy sand.

In the E' and Bt horizon, if it occurs, the E' part has hue of 10YR, value of 5 or 6, and chroma of 3 to 6. The Bt part has hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction is sand or loamy sand in both the E' and Bt parts.

CrD—Croom and Evesboro soils, 10 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: In some areas this map unit has slope of more than 15 percent.

Component Description

Croom and similar soils

Composition: 55 percent
Landform: Ravines and divides
Slope: 10 to 15 percent
Texture of the surface layer: Gravelly loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly fluviomarine deposits
Flooding: None
Available water capacity: Average of 4.19 inches

Evesboro and similar soils

Composition: 30 percent
Landform: Divides
Slope: 10 to 15 percent
Texture of the surface layer: Gravelly sandy loam
Restrictive feature: None noted
Drainage class: Excessively drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Sandy eolian deposits or fluviomarine sediments, or both
Flooding: None
Available water capacity: Average of 4.66 inches

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides

Beltsville and similar soils

Composition: 5 percent
Landform: Divides and dissected uplands

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Downer Series

The Downer series consists of very deep, well drained soils on flats, interstream divides, knolls, and pediments of dissected coastal uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy fluviomarine sediments. Permeability is moderate. Slope ranges from 0 to 15 percent.

Downer soils are in areas adjacent to Evesboro, Hammonton, Sassafras, and Woodstown soils. Evesboro soils have a sandy particle-size control section, do not have an argillic horizon, and are on the slightly higher landforms. Hammonton and Woodstown soils are moderately well drained. Sassafras soils average 18 to 35 percent clay.

Typical Pedon

Downer fine sandy loam, on a 5 percent slope, in a field, in Anne Arundel County, Maryland; about 3.4 miles northwest of Crofton; 1.5 miles west-northwest of the intersection of Maryland Route 424, Patuxent Road, and Myers Station Road, 250 feet south of Conway Road; USGS Odenton topographic quadrangle; lat. 39 degrees 02 minutes 02 seconds N. and long. 76 degrees 44 minutes 28 seconds W., NAD 27.

Ap—0 to 12 inches; brown (10YR 4/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.

Bt1—12 to 18 inches; yellowish brown (10YR 5/6) sandy loam; weak coarse subangular blocky structure; very friable; many fine roots; common distinct clay bridges between sand grains; few faint clay films on faces of peds; moderately acid; clear smooth boundary.

Bt2—18 to 24 inches; strong brown (7.5YR 5/6) sandy loam; weak coarse and medium subangular blocky structure; friable; common fine roots; many distinct clay bridges between sand grains; few faint clay films on faces of peds; moderately acid; clear smooth boundary.

Bt3—24 to 31 inches; strong brown (7.5YR 4/6) sandy loam; moderate medium subangular blocky structure; friable; few fine roots; common faint clay films on faces of peds; strongly acid; clear smooth boundary.

BC—31 to 38 inches; strong brown (7.5YR 5/6) loamy sand; weak coarse subangular blocky structure; very friable; strongly acid; clear smooth boundary.

C1—38 to 54 inches; strong brown (7.5YR 5/8) sand; massive; very friable; strongly acid; clear wavy boundary.

C2—54 to 72 inches; yellowish brown (10YR 5/8) and strong brown (7.5YR 5/8) sand; massive; very friable; strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 18 to 38 inches. Depth to a seasonal high water table is more than 72 inches. The content of rounded coarse fragments of mixed gravel and ironstone channers ranges from 0 to 15 percent, by volume, in the surface and subsurface layers and the subsoil and from 0 to 60 percent, by volume, in the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4. The fine-earth fraction is loamy sand or sandy loam.

The E horizon, if it occurs, has hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 2 to 6. The fine-earth fraction is sand, loamy sand, or sandy loam.

The BA or BE horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 6. The fine-earth fraction is sand, loamy sand, or sandy loam.

The Bt horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction is dominantly sandy loam but ranges from loamy sand

to sandy clay loam in some pedons. The weighted average clay content of the Bt horizon ranges from 8 to 18 percent.

The BC and C horizons have hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 4 to 8. Within a depth of 40 inches, the fine-earth fraction is dominantly sand or loamy sand. At a depth of more than 40 inches, it ranges from coarse sand to sandy clay loam and the soil material is in thin strata.

Hammonton Series

The Hammonton series consists of very deep, moderately well drained soils on flats and in open depressions on dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy fluviomarine sediments. Permeability is moderate or moderately rapid. Slope ranges from 0 to 15 percent.

Hammonton soils are commonly in areas adjacent to Downer, Evesboro, Fort Mott, Sassafras, and Woodstown soils. Downer and Fort Mott soils have a seasonal high water table at a depth of more than 72 inches and are well drained. Fort Mott soils have a sandy surface soil that is 20 to 40 inches thick. Evesboro soils have a seasonal high water table at a depth of more than 72 inches, are excessively drained, and do not have an argillic horizon. Sassafras soils are well drained and average more than 18 percent clay throughout. Woodstown soils average more than 18 percent clay throughout and are in the slightly higher landscape positions.

Typical Pedon

Hammonton loamy sand, in a wooded area, in Anne Arundel County, Maryland; about 1.9 miles southeast of Dorsey; 1.6 miles north-northeast of the intersection of Maryland Route 175 (Annapolis Road) and Maryland Route 713 (Ridge Road); 1 mile southwest of Shipley's Corner; 0.7 mile southeast of Maryland Route 295 (Baltimore-Washington Parkway); 900 feet northwest of Clark Road; USGS Relay topographic quadrangle; lat. 39 degrees 09 minutes 11 seconds N. and long. 76 degrees 43 minutes 51 seconds W., NAD 83.

Oi—0 to 1 inch; partially decomposed leaf litter.

A1—1 to 2 inches; very dark grayish brown (10YR 3/2) loamy sand; weak medium granular structure; very friable; common very fine, medium, and coarse roots throughout; 3 percent subrounded quartzite gravel; very strongly acid; gradual wavy boundary.

A2—2 to 14 inches; dark yellowish brown (10YR 3/4) loamy sand; weak medium granular structure; very friable; common very fine, fine, and medium roots throughout; 3 percent subrounded quartzite gravel; very strongly acid; clear smooth boundary.

Bt—14 to 25 inches; strong brown (7.5YR 4/6) sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots throughout; few fine tubular pores; few distinct strong brown (7.5YR 4/6) clay bridging between sand grains; 5 percent subrounded quartzite gravel; very strongly acid; gradual smooth boundary.

BC—25 to 32 inches; strong brown (7.5YR 5/6) loamy sand; massive; loose; few fine and medium roots throughout; 7 percent subrounded quartzite gravel; extremely acid; gradual wavy boundary.

C1—32 to 48 inches; loamy coarse sand, 45 percent pink (7.5YR 7/4) and 50 percent brownish yellow (10YR 6/6); single grain; loose; few medium roots throughout; common medium prominent light gray (10YR 7/2) clay depletions on faces of peds; 10 percent subrounded quartzite gravel; extremely acid; clear smooth boundary.

C2—48 to 66 inches; coarse sand, 30 percent pink (7.5YR 7/4), 30 percent strong brown (7.5YR 4/6), and 30 percent brownish yellow (10YR 6/6); single grain;

loose; common coarse and very coarse prominent light gray (10YR 7/2) clay depletions throughout; 5 percent subrounded quartzite gravel; extremely acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 20 to 40 inches. The depth to a seasonal high water table ranges from 20 to 40 inches. The content of coarse fragments of rounded quartzite gravel ranges from 0 to 10 percent, by volume, in the surface and subsurface layers and the subsoil; from 0 to 20 percent, by volume, in individual subhorizons; and to as much as 40 percent, by volume, in the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid.

The O horizon has hue of 5YR to 10YR, value of 2 to 4, and chroma of 1 to 3. The decomposition of the organic material ranges from slight to high.

The A or Ap horizon has hue of 10YR to 5Y, value of 3 to 6, and chroma of 1 to 4. The fine-earth fraction is loamy sand or sandy loam.

The E horizon, if it occurs, has hue of 10YR to 5Y and value and chroma of 4 to 6. The fine-earth fraction is loamy sand or sandy loam.

The Bt horizon has hue of 7.5YR to 5Y, value of 4 to 7, and chroma of 3 to 8. Iron depletions with chroma of 2 or less and masses of iron accumulations with chroma of more than 5 are within 24 inches of the top of the Bt horizon. The fine-earth fraction is dominantly sandy loam, but thin subhorizons of sandy clay loam or loamy sand are in many pedons.

The Btg horizon, if it occurs, is at a depth of more than 36 inches. It has hue of 10YR to 5Y or is neutral. It has value of 4 to 7 and chroma of 0 to 2. Redoximorphic iron masses in shades of red, brown, or yellow are in most pedons. Textures are the same as those of the Bt horizon.

The BC horizon has colors similar to those of the Bt horizon. The fine-earth fraction ranges from sand to sandy loam.

The C horizon is commonly stratified and has hue of 7.5YR to 5Y, value of 5 to 8, and chroma of 1 to 8. The fine-earth fraction is dominantly sand, coarse sand, loamy coarse sand, or loamy sand but may include thin strata of sandy clay loam or, at a depth of more than 40 inches, sandy clay. Redoximorphic iron masses in shades of red, brown, or yellow and iron depletions in shades of gray are in most pedons.

DhB—Downer-Hammonton sandy loams, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Downer and similar soils

Composition: 50 percent
Landform: Knolls and divides
Slope: 2 to 5 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.7 inches

Hammonton and similar soils

Composition: 30 percent
Landform: Divides and depressions
Slope: 2 to 5 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.5 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.38 inches

Additional Components

Alloway and similar soils

Composition: 10 percent
Landform: Divides

Sassafras and similar soils

Composition: 10 percent
Landform: Ravines, scarps, terraces, and divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

DhC—Downer-Hammonton sandy loams, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Downer and similar soils

Composition: 50 percent
Landform: Divides and knolls
Slope: 5 to 10 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.7 inches

Hammonton and similar soils

Composition: 30 percent
Landform: Depressions and divides
Slope: 5 to 10 percent
Texture of the surface layer: Sandy loam

Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.5 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.38 inches

Additional Components

Sassafras and similar soils

Composition: 15 percent
Landform: Ravines, scarps, terraces, and divides

Alloway and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

DhD—Downer-Hammonton sandy loams, 10 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Downer and similar soils

Composition: 50 percent
Landform: Divides and knolls
Slope: 10 to 15 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.7 inches

Hammonton and similar soils

Composition: 35 percent
Landform: Depressions and divides
Slope: 10 to 15 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.5 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.38 inches

Additional Components

Sassafras and similar soils

Slope: 15 percent
Landform: Ravines and scarps

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Phalanx Series

The Phalanx series consists of very deep, well drained soils that have root-restricting ironstone within a depth of 20 to 40 inches. These soils are on interstream divides of dissected uplands in the northern part of the Atlantic Coastal Plain Province. They formed in loamy fluviomarine sediments. Permeability is very slow. Slope ranges from 5 to 10 percent.

Phalanx soils are commonly in areas adjacent to Chillum, Croom, Fort Mott, Sassafras, and Downer soils. Chillum, Croom, Fort Mott, Sassafras, and Downer soils do not have a petroferric contact or cemented layers. Chillum and Sassafras soils average between 18 to 35 percent clay throughout. Croom soils average more than 35 percent rock fragments throughout. Fort Mott soils have a sandy surface soil that is more than 20 inches thick. Downer soils are on the lower landforms.

Typical Pedon

Phalanx loamy sand, 2 to 5 percent slopes, in an area of woodland, in Ocean County, New Jersey; about 0.5 mile west of Cassville and 150 feet north of County Road 528; USGS Cassville topographic quadrangle; lat. 40 degrees 06 minutes 12 seconds N. and long. 74 degrees 23 minutes 47 seconds W., NAD 83.

A—0 to 2 inches; dark brown (7.5YR 3/2) loamy sand, brown (7.5YR 4/2) dry; weak medium granular structure; very friable; many fine roots; many medium irregular pores; extremely acid; clear smooth boundary.

E—2 to 6 inches; reddish brown (5YR 5/3) loamy sand; weak medium granular structure; very friable; many fine and medium roots; many fine irregular pores; extremely acid; gradual wavy boundary.

Bt1—6 to 12 inches; red (2.5YR 4/6) sandy loam; weak medium subangular blocky structure; very friable; common medium and fine roots; many fine irregular pores; very strongly acid; diffuse wavy boundary.

Bt2—12 to 28 inches; red (2.5YR 4/6) channery sandy loam; weak medium subangular blocky structure; very friable; common medium roots; many fine irregular pores; common faint clay films on faces of peds and common clay bridging between sand grains; 20 percent indurated petroferric fragments; very strongly acid; gradual wavy boundary.

Bm—28 to 32 inches; red (10R 4/6) cemented material; massive; indurated; common fine and medium roots in cracks; cemented material (ironstone) horizontal and more than 90 percent continuous; cracks more than 4 inches apart and filled with red sandy loam soil material; very strongly acid; gradual wavy boundary.

BC—32 to 35 inches; red (2.5YR 4/6) extremely flaggy loamy sand; massive; very friable; few medium and fine roots; common fine irregular pores; few clay bridges between sand grains; 75 percent indurated petroferric fragments; very strongly acid; gradual wavy boundary.

B'm—35 to 40 inches; red (10R 4/6) cemented material; massive; indurated; common fine and medium roots in cracks; cemented material (ironstone) horizontal and more than 90 percent continuous; cracks more than 4 inches apart and filled with red loamy sand soil material; very strongly acid; gradual wavy boundary.

BC''—40 to 43 inches; red (2.5YR 4/6) very channery loamy sand; massive; very friable; few medium and fine roots; common fine irregular pores; few clay bridges between sand grains; 50 percent indurated petroferric fragments; very strongly acid; gradual wavy boundary.

B''m—43 to 46 inches; red (2.5YR 4/6) cemented material; massive; indurated; common fine and medium roots in cracks; cemented material (ironstone) horizontal and more than 90 percent continuous; cracks more than 4 inches apart and filled with red loamy sand soil material; very strongly acid; gradual wavy boundary.

C—46 to 80 inches; yellowish red (5YR 5/6) sand; single grain; loose; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon is 30 to 60 inches. The depth to a seasonal high water table is more than 72 inches. Depth to the first ironstone layer (petroferric contact) ranges from 20 to 40 inches. The consistence of the ironstone layers ranges from weakly cemented to indurated, and all pedons have at least one indurated layer within a depth of 40 inches. The coarse fragments are primarily ironstone but include some quartzose pebbles. The content of rock fragments ranges from 0 to 15 percent, by volume, in the surface layer and upper part of the subsoil; from 20 to 75 percent, by volume, in the thin layers within the lower part of the subsoil; and from 0 to 75 percent, by volume, in the layers within the substratum. In unlimed areas reaction is very strongly acid or extremely acid.

The A or Ap horizon has hue of 5YR to 10YR, value of 3 or 4, and chroma of 2 to 4. The fine-earth fraction is sand, loamy sand, or sandy loam.

The BE horizon, if it occurs, has hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 8. The fine-earth fraction is loamy sand or sandy loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is loamy sand, sandy loam, or sandy clay loam. The top 20 inches of the subsoil averages from 12 to 18 percent clay. The Bt horizon is made up of earthy materials alternated with thin to thick (1/8 inch to several inches thick), continuous sheets of fractured ironstone.

The C horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 6 to 8. The fine-earth fraction is sand, loamy sand, or sandy clay loam. This horizon contains large ironstone boulders and flagstones.

DxC—Downer-Phalanx complex, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Note: In some areas the color of the soil is yellower than that listed in the range in characteristics of the official series description.

Component Description

Downer and similar soils

Composition: 50 percent
Landform: Knolls and divides
Slope: 5 to 10 percent
Texture of the surface layer: Sandy loam

Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.7 inches

Phalanx and similar soils

Composition: 35 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Loamy sand
Depth to a restrictive feature: 20 to 40 inches to an ironstone cemented layer
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 4.56 inches

Additional Components

Russett and similar soils

Composition: 10 percent
Landform: Divides

Hammonton and similar soils

Composition: 5 percent
Landform: Depressions and divides

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

Elioak Series

The Elioak series consists of very deep, well drained soils on uplands of the Piedmont Province. These soils formed in material weathered from micaceous schist and gneiss. Permeability is moderate. Slope ranges from 3 to 15 percent.

Elioak soils are similar to Codorus, Glenelg, Glenville, Hatboro, Legore, Manor, and Montalto soils. Codorus and Hatboro soils do not have an argillic horizon. Glenelg, Glenville, and Legore soils have less than 35 percent clay in the particle-size control section. Legore and Montalto soils have base saturation of more than 35 percent in the C horizon. Codorus and Hatboro soils are on flood plains. Glenville soils are on footslopes or near the head of drainageways. Glenelg, Legore, Manor, and Montalto soils are in landscape positions similar to those of the Elioak soils.

Typical Pedon

Elioak silt loam, 3 to 8 percent slopes, in Montgomery County, Maryland; about 2 miles north of Rockville, 50 feet east of the intersection of Chieftan Avenue and Derwood Road.

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine granular structure; very friable; many fine roots; moderately acid; abrupt smooth boundary.

E—6 to 10 inches; yellowish brown (10YR 5/4) silt loam; weak fine and medium granular structure; very friable; common fine roots; strongly acid; gradual smooth boundary.
BE—10 to 15 inches; yellowish red (5YR 5/6) silt loam; weak fine subangular blocky structure; friable; few fine roots; strongly acid; gradual smooth boundary.
Bt1—15 to 33 inches; red (2.5YR 4/6) silty clay loam; moderate fine subangular blocky structure; friable; few fine roots; many prominent clay films on faces of peds; clear wavy boundary.
Bt2—33 to 42 inches; variegated red (2.5YR 5/6), yellowish red (5YR 5/6), and strong brown (5YR 5/6) silty clay loam; weak medium platy structure; friable; few fine roots; many prominent clay films on faces of peds; common fine mica flakes; strongly acid; gradual wavy boundary.
C—42 to 60 inches; variegated yellowish red (5YR 4/6), weak red (10R 6/8), and reddish yellow (7.5YR 6/8) silt loam; fine and distinct variegations, the cut faces of which appear brindled; very friable; many fine mica flakes; strongly acid.

Range in Characteristics

The depth to bedrock is more than 5 feet. The content of rock fragments ranges from 0 to 20 percent, by volume, in the B and C horizons. In unlimed areas reaction ranges from moderately acid to very strongly acid.

The A and E horizons have hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4.

The B horizon generally has hue of 10R to 5YR, value of 3 to 5, and chroma of 4 to 8, but some subhorizons are variegated. The fine-earth fraction is silty clay loam, clay loam, or silty clay.

The C horizon is commonly variegated in shades of yellow or red. In some pedons it is uniform in color with hue of 2.5YR to 7.5YR and value and chroma of 4 to 6. The fine-earth fraction is loam, silt loam, or fine sandy loam

EaB—Elioak silt loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Uplands

Component Description

Elioak and similar soils

Composition: 85 percent
Landform: Divides
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from micaceous schist
Flooding: None
Available water capacity: Average of 7.3 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

EbC—Evesboro loamy sand, 2 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: In some areas the soil has more than 25 percent gravel in one or more horizons.

Component Description

Evesboro and similar soils

Composition: 85 percent
Landform: Divides
Slope: 2 to 10 percent
Texture of the surface layer: Loamy sand
Restrictive feature: None noted
Drainage class: Excessively drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Sandy eolian deposits or fluviomarine sediments, or both
Flooding: None
Available water capacity: Average of 4.66 inches

Additional Components

Croom and similar soils

Composition: 10 percent
Landform: Ravines and divides

Chillum and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

Fallsington Series

The Fallsington series consists of very deep, poorly drained soils in depressions and swales, on flats, and at the head of drainageways of coastal uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy fluviomarine sediments. Permeability is moderate. Slope ranges from 0 to 2 percent.

Fallsington soils are commonly in areas adjacent to Beltsville, Chillum, Croom, Downer, Hammonton, Russett, Sassafras, and Woodstown soils. Beltsville soils are moderately well drained and have a fragipan. Croom soils average more than

35 percent rock fragments throughout and are well drained. Chillum, Downer, and Sassafras are well drained. Hammonton, Russett, and Woodstown soils are moderately well drained.

Typical Pedon

Fallsington loam, on a 1 percent slope, along a power line right-of-way, in Anne Arundel County, Maryland; about 2.7 miles northwest of Crofton; 0.5 mile northwest of the intersection of Maryland Route 424 (Conway Road), Patuxent Road, and Myers Station Road, 900 feet north of Conway Road, 900 feet east of Braggs Road, 15 feet south of the edge of the woods; USGS Odenton topographic quadrangle; lat. 39 degrees 01 minute 53 seconds N. and long. 76 degrees 44 minutes 25 seconds W., NAD 27.

Ap1—0 to 3 inches; very dark grayish brown (10YR 3/2) loam; weak medium subangular blocky structure parting to weak fine granular; friable; many fine and common medium roots; strongly acid; clear smooth boundary.

Ap2—3 to 6 inches; gray (2.5Y 5/1) loam; moderate medium subangular blocky structure; friable; many fine and few medium roots; common fine vesicular and few medium and common fine tubular pores; common fine strong brown (7.5YR 4/6) iron accumulations as masses in a dendritic pattern; many coarse gray (10YR 5/1) organic stains; strongly acid; clear smooth boundary.

Btg1—6 to 14 inches; light gray (2.5Y 7/1) loam; moderate medium subangular blocky structure; friable; few medium and common fine roots; common fine and few medium vesicular and common fine tubular pores; very few faint clay films; many medium brownish yellow (10YR 6/6), common fine yellowish red (5YR 4/6), and many medium light yellowish brown (2.5Y 6/4) iron accumulations as masses in a dendritic pattern; 1 percent mixed gravel; very strongly acid; clear smooth boundary.

Btg2—14 to 27 inches; gray (2.5Y 6/1) sandy clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky; friable; common fine and many very fine roots between peds and few medium roots; many fine vesicular and few fine tubular pores; few faint discontinuous clay films; many medium strong brown (7.5YR 4/6) and common medium light yellowish brown (2.5Y 6/4) masses of iron accumulation; 2 percent mixed gravel; very strongly acid; clear smooth boundary.

Btg3—27 to 37 inches; gray (2.5Y 6/1) sandy clay loam; weak coarse prismatic structure parting to moderate medium subangular blocky parting to weak fine platy; friable; common very fine roots; common medium vesicular and many fine vesicular and tubular pores; very few discontinuous distinct clay films; many medium and coarse prominent strong brown (7.5YR 4/6) iron accumulations as soft masses in a dendritic pattern; 5 percent mixed gravel; very strongly acid; abrupt smooth boundary.

2BCg—37 to 41 inches; light gray (N 7/) gravelly loamy sand; single grain; very friable; many medium prominent light yellowish brown (2.5Y 6/4) and common medium prominent strong brown (7.5YR 4/6) iron accumulations as soft masses; 25 percent mixed gravel; very strongly acid; abrupt smooth boundary.

2C1—41 to 48 inches; strong brown (7.5YR 4/6) very gravelly coarse sand; single grain; very friable; many coarse prominent yellowish brown (10YR 5/6) iron accumulations as soft masses; many medium prominent white (N 8/) iron depletions; 55 percent mixed gravel; very strongly acid; clear smooth boundary.

2C2—48 to 58 inches; yellowish brown (10YR 5/8) gravelly sand; single grain; very friable; many coarse prominent light yellowish brown (2.5Y 6/4) iron accumulations as soft masses; 15 percent mixed gravel; very strongly acid; clear smooth boundary.

3Cg—58 to 72 inches; light gray (N 7/) stratified clay loam and sandy loam; massive; friable; few fine roots; many fine and medium prominent strong brown (7.5YR 5/8) and many medium prominent light yellowish brown (2.5Y 6/4) iron accumulations as soft masses; very strongly acid; 5 percent mixed gravel.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 24 to 40 inches. The seasonal high water table is within a depth of 10 inches. The content of rounded coarse fragments of mixed gravel ranges from 0 to 10 percent, by volume, in the surface layer; from 0 to 25 percent, by volume, in the subsoil; and from 0 to 65 percent, by volume, in the substratum. The content of ironstone channers makes up from 0 to 15 percent, by volume, of the surface and subsurface layers and the subsoil and from 0 to 50 percent, by volume, of the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 2 to 6, and chroma of 1 to 3. The fine-earth fraction is sandy loam or loam.

The Btg horizon has hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 1 or 2. The fine-earth fraction is sandy loam, sandy clay loam, or loam. In many pedons the content of gravel ranges from 15 to 25 percent, by volume. Most pedons have masses of iron in shades of red, brown, yellow, or olive.

The BCg and Cg horizons have hue of 10YR or 2.5Y or are neutral. They have value of 4 to 7 and chroma of 0 to 2. The fine-earth fraction ranges from very coarse sand to sandy clay loam. In many pedons these horizons have masses of iron in shades of red, brown, yellow, or olive.

The 2BCg horizon, if it occurs, has hue of 10YR to 5Y, value of 4 to 7, and chroma of 1 or 2 or is neutral with value of 4 to 8. The fine-earth fraction is loamy sand, sandy loam, or sandy clay loam. In many pedons this horizon has masses of iron in shades of red, brown, yellow, or olive.

The 2C horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction ranges from coarse sand to clay loam. In many pedons this horizon has masses of iron in shades of red, brown, yellow, or olive.

The 2Cg or 3Cg horizon, if it occurs, is neutral with value of 7. The fine-earth fraction ranges from coarse sand to clay loam. In many pedons this horizon has iron masses in shades of red, brown, yellow, or olive.

Fa—Fallsington sandy loam, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: Some areas of this map unit are ponded for brief periods of time.

Component Description

Fallsington and similar soils

Composition: 85 percent
Landform: Swales, divides, drainageways, and depressions
Slope: 0 to 2 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 1 foot
Parent material: Loamy fluviomarine sediments

Flooding: None
Available water capacity: Average of 9.0 inches

Additional Components

Russett and similar soils

Composition: 10 percent
Landform: Divides

Alloway and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Gaila Series

The Gaila series consists of very deep, well drained soils on nearly level to strongly sloping uplands. These soils formed in material weathered from quartz muscovite schist. Permeability is moderately rapid. Slope ranges from 3 to 25 percent.

Gaila soils are similar to Occoquan soils and are in areas adjacent to Baile, Glenelg, Glenville, and Manor soils. The poorly drained Baile and moderately well drained Glenville soils are in concave positions on the landscape and are subject to seasonal wetness. The thickness of the solum in the Glenelg soils ranges from 20 to 40 inches. The deep Occoquan soils have bedrock within a depth of 60 inches. Manor soils average less than 18 percent clay throughout, do not have an argillic horizon, and contain more mica throughout.

Typical Pedon

Gaila silt loam, 3 to 8 percent slopes, in Montgomery County, Maryland; about 1 mile south of Sandy Spring; about 4,000 feet south from Olney Sandy Spring Road on Meeting House Road, and 1,000 feet east.

Ap—0 to 8 inches; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; common fine roots; common very fine interstitial pores; about 5 percent gravel; neutral; abrupt smooth boundary.

Bt—8 to 17 inches; strong brown (7.5YR 5/8) loam; strong medium subangular blocky structure; friable; few fine roots; common very fine tubular pores; many prominent clay films on faces of peds and lining pores; strongly acid; clear wavy boundary.

BC—17 to 20 inches; yellowish brown (10YR 5/8) loam; weak medium subangular blocky structure; friable; few fine roots; common very fine interstitial pores; few faint clay films lining pores; strongly acid; clear wavy boundary.

C—20 to 76 inches; yellowish brown (10YR 5/4) fine sandy loam; massive; friable; very strongly acid.

Range in Characteristics

The depth to bedrock is more than 5 feet. The content of rock fragments ranges from 0 to 15 percent, by volume, throughout the profile. In unlimed areas reaction ranges from extremely acid to strongly acid.

The A horizon has hue of 5YR to 2.5Y, value of 3 to 5, and chroma of 2 to 4. The fine-earth fraction is loam, silt loam, or sandy loam.

The B horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction is sandy loam, loam, or sandy clay loam.

The C horizon commonly is multicolored in shades of red, yellow, brown, or white. The fine-earth fraction is sandy loam, loamy sand, or loam. This horizon has a high content of mica.

GaC—Gaila loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gaila and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist
Flooding: None
Available water capacity: Average of 7.45 inches

Additional Components

Manor and similar soils

Composition: 15 percent
Landform: Summits and side slopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GaD—Gaila loam, 15 to 25 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gaila and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 15 to 25 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained

Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist
Flooding: None
Available water capacity: Average of 7.45 inches

Additional Components

Manor and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Gladstone Series

The Gladstone series consists of very deep, well drained soils on upland divides and rolling foothills of the Piedmont Province. These soils formed in residuum derived from gneiss. Permeability is moderate in the subsoil and moderately rapid in the substratum. Slope ranges from 0 to 25 percent.

Gladstone soils are similar to Glenelg soils and are commonly in areas adjacent to Bannertown, Glenville, Jackland, Legore, and Manor soils. Bannertown soils are 20 to 40 inches deep over bedrock. They average less than 18 percent clay throughout. Glenelg soils formed in micaceous schist. They have a Bt horizon that is dominated by silt loam and silty clay loam. The somewhat poorly drained Jackland soils formed in residuum derived from diabase and basalt. Legore soils formed in material derived from diabase, diorite, and related rocks. Manor soils formed in micaceous schist and phyllite and average less than 18 percent clay throughout. The moderately well drained Glenville soils are in upland drainage swales and on concave flats. They have fragic characteristics.

Typical Pedon

Gladstone loam, 3 to 8 percent slopes, in a hayfield, in Howard County, Maryland; about 1.25 miles east of the intersection of Route 99 and Marriottsville Road, 300 feet northeast of the entrance of the Howard County Conservancy on Marriottsville Road; lat. 39 degrees 18 minutes 48 seconds N. and long. 76 degrees 52 minutes 35 seconds W., NAD 83.

Ap1—0 to 3 inches; dark yellowish brown (10YR 4/4) loam; common fine and medium prominent strong brown (7.5YR 5/8) mottles; weak coarse subangular blocky structure parting to moderate medium subangular blocky; friable; many fine, common medium, and common coarse roots throughout; many fine to coarse tubular pores; 5 percent subrounded gneiss gravel; slightly acid; clear wavy boundary.

Ap2—3 to 8 inches; dark yellowish brown (10YR 4/4) loam; moderate fine and medium subangular blocky structure; friable; many fine roots throughout; many fine and medium vesicular and tubular pores; 5 percent subrounded gneiss gravel; slightly acid; abrupt wavy boundary.

Bt1—8 to 18 inches; brown (7.5YR 4/4) clay loam; moderate medium and coarse subangular blocky structure; friable; many fine and medium roots throughout; many medium and coarse vesicular and tubular pores; few discontinuous faint

brown (7.5YR 4/3) clay films on faces of peds and in pores; few medium prominent black (N 2.5/) manganese or iron and manganese accumulations on faces of peds; 5 percent subrounded gneiss gravel; moderately acid; clear wavy boundary.

Bt2—18 to 30 inches; yellowish red (5YR 4/6) sandy clay loam; weak coarse and very coarse prismatic structure parting to moderate medium subangular blocky; friable; many fine roots in cracks; many fine vesicular and many fine and medium tubular pores; common continuous distinct brown (7.5YR 4/4) clay films on faces of peds and in pores; 5 percent subrounded gneiss gravel; strongly acid; clear wavy boundary.

BCt—30 to 47 inches; brown (7.5YR 4/4) and yellowish brown (5YR 5/8) sandy loam; weak very coarse subangular blocky structure parting to moderate thick platy; friable; many fine roots throughout; many fine and medium vesicular and tubular pores; many fine faint brown (7.5YR 4/3) clay films on faces of peds; 10 percent subrounded gneiss pebbles and 4 percent subrounded gneiss cobbles; strongly acid; clear wavy boundary.

Ct—47 to 72 inches; loamy sand, 55 percent dark yellowish brown (10YR 4/4) and 45 percent yellowish red (5YR 5/8); weak thin platy structure; friable; common very fine and fine roots in cracks; common medium and coarse and many fine tubular pores; common distinct brown (7.5YR 4/3) clay films between sand grains; strongly acid.

Range in Characteristics

The thickness of the solum ranges from 30 to 50 inches. The depth to gneiss bedrock is 60 inches or more. The content of gravel ranges from 5 to 35 percent, by volume, throughout the solum and from 10 to 40 percent, by volume, in the substratum. The content of stones ranges from 0 to 20 percent, by volume, but is generally less than 5 percent in the subsoil and substratum. In unlimed areas reaction is strongly acid or very strongly acid throughout.

The Ap horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 2 to 5. The fine-earth fraction is loam or sandy loam.

The Bt and BE horizons, if they occur, have hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. The fine-earth fraction is loam, sandy clay loam, or clay loam.

The BC horizon, if it occurs, has colors similar to those of the overlying Bt horizon. The fine-earth fraction is dominantly sandy loam, loamy sand, or sand.

The C horizon has hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8. The fine-earth fraction is dominantly sandy loam, loam, loamy sand, or the coarse analogs of those textures.

GbA—Gladstone loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 85 percent
Landform: Summits, backslopes, and ridges
Slope: 0 to 3 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained

Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Glenville and similar soils

Composition: 5 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GbB—Gladstone loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 85 percent
Landform: Summits, backslopes, and ridges
Slope: 3 to 8 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GbC—Gladstone loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 85 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Manor and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Legore Series

The Legore series consists of very deep, well drained soils on gently sloping to steep uplands that consist of narrow dikes. These soils formed in material weathered from diabase, diorite, and other related basic rock. Permeability is moderate. Slope ranges from 3 to 65 percent.

Legore soils are similar to Montalto soils and in areas adjacent to Bannertown, Gladstone, Jackland, Manor, Mount Lucas, Relay, and Watchung soils. The moderately well drained Mount Lucas, somewhat poorly drained Jackland, and poorly drained Watchung soils formed in residuum derived from similar kinds of bedrock. They are in upland drainage swales and on concave footslopes and slightly concave upland flats. The moderately deep Bannertown and the very deep Gladstone soils formed in material derived from gneiss and granitic gneiss. They are in areas of the adjacent landscapes. The very deep Manor soils formed in material weathered from micaceous schist. They contain much more mica than the Legore soils and average less than 18 percent clay throughout. Relay soils have more than

60 percent base saturation. Montalto soils average more than 35 percent clay throughout.

Typical Pedon

Legore gravelly silt loam, 3 to 8 percent slopes, in a woodlot, in Frederick County, Maryland; about 200 feet southeast of Legore Bridge Road and 700 feet west of the intersection of Legore Bridge Road and Legore Road; lat. 39 degrees 31 minutes 17 seconds N. and long. 77 degrees 34 minutes 47 seconds W., NAD 83.

Oi—0 to 1 inch; leaves and twigs.

A—1 to 2 inches; very dark grayish brown (10YR 3/2) gravelly silt loam; strong medium granular structure; friable; many fine and medium roots; 15 percent gravel; strongly acid; clear wavy boundary.

BE—2 to 11 inches; yellowish brown (10YR 5/4) silt loam; moderate fine subangular blocky structure; firm; many fine and medium roots; 10 percent gravel; strongly acid; clear wavy boundary.

Bt—11 to 27 inches; strong brown (7.5YR 4/6) silty clay loam; moderate medium subangular blocky structure; firm; many fine and medium roots; 5 percent gravel; moderately acid; few faint clay films on faces of peds; gradual wavy boundary.

BC—27 to 52 inches; dark yellowish brown (10YR 4/6) and brownish yellow (10YR 6/6) silt loam; moderate medium subangular blocky structure; firm; few fine roots; moderately acid; gradual wavy boundary.

C—52 to 72 inches; yellowish brown (10YR 5/8) and dark yellowish brown (10YR 4/6) sandy loam; massive; firm; moderately acid.

Range in Characteristics

The thickness of the solum ranges from 20 to 34 inches. The depth to bedrock commonly ranges from 5 to 10 feet. The content of rock fragments of diabase, diorite, or related basic rock ranges from 0 to 35 percent, by volume, throughout. The rock fragments are mainly gravel but can be as large as stones and boulders. Reaction is strongly acid to slightly acid, and acidity decreases with depth.

The A horizon has hue of 5YR to 10YR, value of 3 or 4, and chroma of 2 to 4. The fine-earth fraction is silt loam, loam, or silty clay loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 6. The fine-earth fraction is silty clay loam or clay loam.

The BC horizon, if it occurs, has colors similar to those of the Bt horizon. The fine-earth fraction is silt loam, sandy loam, or loam.

The C horizon is variegated but dominantly has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 4 to 8. The fine-earth fraction is sandy loam, loam, or silt loam. This horizon consists mostly of saprolite.

GcB—Gladstone-Legore complex, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 55 percent
Landform: Summits, backslopes, and ridges
Slope: 3 to 8 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)

Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Legore and similar soils

Composition: 30 percent
Landform: Summits, backslopes, and ridges
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GcC—Gladstone-Legore complex, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 55 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Legore and similar soils

Composition: 30 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam

Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Manor and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GdC—Gladstone-Legore complex, 8 to 15 percent slopes, stony

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 55 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Legore and similar soils

Composition: 30 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Manor and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GdD—Gladstone-Legore complex, 15 to 25 percent slopes, stony

Map Unit Setting

Landscape: Upland

Component Description

Gladstone and similar soils

Composition: 55 percent
Landform: Summits, backslopes, and ridges
Slope: 15 to 25 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Legore and similar soils

Composition: 30 percent
Landform: Summits, backslopes, and ridges
Slope: 15 to 25 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Manor and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GfB—Gladstone-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland
Note: In some areas east of Columbia near Rockburn Branch and Patapsco Valley State Park, this map unit may include as much as 30 percent Legore and similar soils.

Component Description

Gladstone and similar soils

Composition: 50 percent
Landform: Summits, backslopes, and ridges
Slope: 0 to 8 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Urban land

Composition: 40 percent

Additional Components

Udorthents

Composition: 10 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GfC—Gladstone-Urban land complex, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland
Note: Some areas east of Columbia near Rockburn Branch and Patapsco Valley State Park may include as much as 30 percent Legore and similar soils.

Component Description

Gladstone and similar soils

Composition: 45 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: More than 72 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 6.9 inches

Urban land

Composition: 40 percent

Additional Components

Udorthents

Composition: 15 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Glenelg Series

The Glenelg series consists of very deep, well drained soils on nearly level to strongly sloping uplands in the northern part of the Piedmont Province. These soils formed in residuum derived from phyllite and micaceous schist. Permeability is moderate. Slope ranges from 0 to 15 percent.

Glenelg soils are similar to Gaila soils and are adjacent to Baile, Gladstone, Glenville, Manor, and Occoquan soils. The poorly drained Baile and moderately well drained Glenville soils are in concave upland drainage swales and on concave upland flats. They have a seasonal high water table within a depth of 40 inches. Gaila and Occoquan soils have a solum that is thinner that that of the Glenelg soils. Occoquan soils have bedrock within a depth of 60 inches. Manor soils do not have an argillic horizon and average less than 18 percent clay throughout. They contain more mica throughout. Gladstone soils formed in residuum derived from gneiss.

Typical Pedon

Glenelg loam, 3 to 8 percent slopes, in a field used for crops, in Howard County, Maryland; 0.25 mile southeast of the intersection of St. Michael’s Road and Hardy Road, about 0.5 mile south of Maryland Route 144 on St. Michael’s Road; lat. 39 degrees 20 minutes 09 seconds N. and long. 77 degrees 06 minutes 12 seconds W., NAD 83.

Ap1—0 to 6 inches; brown (10YR 4/3) loam; moderate medium subangular blocky structure parting to strong fine granular; friable; common very fine, many fine, and few medium roots; 5 percent schist channers; slightly acid; clear smooth boundary.

Ap2—6 to 10 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure parting to strong coarse granular; friable; many fine and few medium roots; common fine and coarse tubular pores; 8 percent schist channers; slightly acid; abrupt smooth boundary.

Bt1—10 to 18 inches; strong brown (7.5YR 5/8) clay loam; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; friable; many fine and few medium roots; many fine and common coarse tubular and common medium vesicular pores; common distinct brown (7.5YR 5/4) organic coatings; 3 percent schist channers; moderately acid; clear wavy boundary.

Bt2—18 to 25 inches; strong brown (7.5YR 5/6) clay loam; weak coarse subangular blocky structure parting to moderate medium subangular blocky; friable; common fine roots; many fine tubular and common fine vesicular pores; common distinct brown (7.5YR 5/4) organic coatings on faces of peds and lining pores; 8 percent channers; moderately acid; clear smooth boundary.

BCt1—25 to 30 inches; yellowish brown (10YR 5/6) clay loam; common prominent yellowish red (5YR 5/8) lithochromic mottles; moderate very thick platy structure parting to moderate medium subangular blocky; friable; common fine roots; few fine tubular pores; 5 percent channers; moderately acid; clear smooth boundary.

BCt2—30 to 42 inches; yellowish red (5YR 5/6) and yellowish brown (10YR 5/6) loam; moderate very thick platy structure parting to moderate medium subangular blocky; friable; few fine roots; common fine tubular pores; 5 percent schist channers; strongly acid; clear wavy boundary.

CBt—42 to 54 inches; yellowish red (5YR 5/6) and yellowish brown (10YR 5/6) loam; moderate thick platy structure; friable; few fine roots; many fine and few medium and coarse tubular and common fine vesicular pores; 5 percent schist channers and 2 percent quartz gravel; strongly acid; clear wavy boundary.

C—54 to 76 inches; strong brown (7.5YR 5/8), brownish yellow (10YR 6/8), and yellow (10YR 7/6) very channery sandy loam; weak thick platy structure; friable; few fine roots; 35 percent schist channers; very strongly acid.

Range in Characteristics

The thickness of the solum ranges from 24 to 40 inches. The depth to bedrock is more than 6 feet. The content of rock fragments ranges from 0 to 35 percent, by volume, in the solum and from 5 to 35 percent, by volume, in the substratum.

The A horizon has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 2 to 4. The fine-earth fraction is loam and silt loam.

The E and BE horizons, if they occur, have hue of 7.5YR or 10YR, value of 5 or 6, and chroma of 4 to 6. The fine-earth fraction is loam or silt loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. The fine-earth fraction is loam, silt loam, silty clay loam, or clay loam.

The BC horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. The fine-earth fraction ranges from clay loam to sandy loam.

The C horizon has hue of 2.5YR to 10YR, value of 4 to 7, and chroma of 3 to 8. The fine-earth fraction generally is loam or sandy loam. Silt loam is associated with veins of quartz.

GgA—Glenelg loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Upland

Note: In some areas the soil averages more than 35 percent clay and has a thicker solum than is allowed in the official soil series description.

Component Description

Glenelg and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 0 to 3 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches

Additional Components

Gaila and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Glenville and similar soils

Composition: 10 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GgB—Glenelg loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland
Note: In some areas of the Sykesville Formation, the soil is on dissected interfluves and narrow ridges and shoulders and has bedrock within a depth of 60 inches. In other areas, it averages more than 35 percent clay and has a thicker solum than is allowed in the official soil series description.

Component Description

Glenelg and similar soils

Composition: 85 percent
Landform: Summits and backslopes (fig. 8)
Slope: 3 to 8 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches

Figure 8.—Typical landscape of Glenelg loam, 3 to 8 percent slopes, and Glenville silt loam, 3 to 8 percent slopes. The Glenelg soil is on the summit and side slopes, and the Glenville soil is in the concave area at the right in the photograph. Stripcropping is commonly used to help control erosion.

Additional Components

Gaila and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Glenville and similar soils

Composition: 5 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GgC—Glenelg loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland
Note: In some areas of the Sykesville Formation, the soil is on dissected interfluves and narrow ridges and shoulders and has bedrock within a depth of 60 inches. In other areas, it averages more than 35 percent clay and has a thicker solum than is allowed in the official soil series description.

Component Description

Glenelg and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent

Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches

Additional Components

Gaila and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Manor and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GhB—Glenelg-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Glenelg and similar soils

Composition: 45 percent
Landform: Summits and backslopes
Slope: 0 to 8 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches

Urban land

Composition: 35 percent

Additional Components

Udorthents

Composition: 15 percent
Landform: Summits and backslopes

Glenville and similar soils

Composition: 5 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GhC—Glenelg-Urban land complex, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Glenelg and similar soils

Composition: 45 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches

Urban land

Composition: 30 percent

Additional Components

Udorthents

Composition: 15 percent
Landform: Summits and backslopes

Manor and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Glenville Series

The Glenville series consists of very deep, moderately well drained soils in nearly level concave upland drainage swales and on slightly concave upland flats. These soils formed in residuum and colluvium derived from schist, gneiss, and other crystalline rocks. Permeability is slow. Slope ranges from 0 to 15 percent.

Glenville soils are similar to Mount Lucas soils and are adjacent to Baile, Gaila, Gladstone, Glenelg, Manor, and Occoquan soils. The poorly drained Baile soils do not have a fragipan. The well drained Gaila, Gladstone, Glenelg, Manor, and Occoquan soils also do not have a fragipan. They are in upland landscape positions. Mount Lucas soils are on upland flats. They formed in residuum derived from diabase and other dark basic rocks.

Typical Pedon

Glenville silt loam, 0 to 3 percent slopes, in Montgomery County, Maryland; about 2 miles northwest of Brookeville; about 2,040 feet east and 300 feet south of the intersection of Zion Road and Riggs Road.

Ap—0 to 8 inches; dark brown (10YR 3/3) silt loam; moderate fine and medium subangular blocky structure; friable; many fine and medium roots; 10 percent gravel; neutral; abrupt smooth boundary.

Bt1—8 to 20 inches; yellowish brown (10YR 5/6) gravelly silt loam; moderate medium subangular blocky structure; friable; many medium roots; neutral; clear wavy boundary.

Bt2—20 to 30 inches; yellowish brown (10YR 5/8) silt loam; weak medium angular blocky structure; friable; few fine roots; few faint clay films on faces of peds; common medium faint strong brown (7.5YR 5/8) iron accumulations as soft masses; common medium distinct grayish brown (2.5YR 5/2) iron depletions; 5 percent gravel; strongly acid; clear wavy boundary.

Btx—30 to 40 inches; yellowish brown (10YR 5/4) loam; moderate coarse prismatic structure parting to moderate thick platy; firm; brittle; few medium roots on exterior faces of peds; many prominent clay films on faces of peds; many medium distinct yellowish red (5YR 5/6) iron accumulations as soft masses; few medium distinct pale brown (10YR 6/3) iron depletions; common coarse grayish brown (10YR 5/2) iron depletions on faces of peds; very strongly acid; gradual irregular boundary.

C1—40 to 59 inches; variegated strong brown (7.5YR 5/8), light gray (10YR 6/1), and light yellowish brown (2.5YR 6/4) fine sandy loam; massive; friable; 5 percent gravel; very strongly acid; gradual irregular boundary.

C2—59 to 70 inches; variegated brownish yellow (10YR 6/6), very pale brown (10YR 6/3), and reddish yellow (7.5YR 6/8) sandy loam; massive; very friable; 10 percent pebbles and cobbles; very strongly acid.

Range in Characteristics

The thickness of the solum ranges from 30 to 40 inches. The depth to bedrock is more than 5 feet. Depth to the fragipan ranges from 15 to 30 inches. The content of rock fragments ranges from 0 to 30 percent, by volume, in the A and B horizons and from 5 to 50 percent, by volume, in the C horizon. In unlimed areas reaction is neutral to very strongly acid in the A horizon, moderately acid to very strongly acid in the B horizon, and strongly acid or very strongly acid in the C horizon.

The A horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6. The fine-earth fraction is loam or silt loam.

The Bt horizon has hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 8. The fine-earth fraction is silt loam, clay loam, or silty clay loam. Iron depletions are in shades of brown, yellow, or gray.

The Btx horizon has hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 3 to 6. The fine-earth fraction is loam or silt loam. Iron masses and depletions are common throughout the horizon.

The C horizon has hue of 2.5YR to 10YR, value of 4 to 6, and chroma of 1 to 8. The fine-earth fraction is loam, sandy loam, or fine sandy loam.

GmA—Glenville silt loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Upland
Note: In some areas the soil does not have fragic properties and the thickness of the surface soil can range up to 20 inches due to the recent deposition of soil material.

Component Description

Glenville and similar soils

Composition: 85 percent
Landform: Concave footslopes, toeslopes, and drainageways
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 7.32 inches

Additional Components

Baile and similar soils

Composition: 10 percent
Landform: Swales, depressions, and drainageways

Glenelg and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GmB—Glenville silt loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland
Note: In some areas the soil does not have fragic properties and the thickness of the surface soil can range up to 20 inches due to the recent deposition of soil material.

Component Description

Glenville and similar soils

Composition: 85 percent
Landform: Concave footslopes, toeslopes, and drainageways
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan

Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 7.32 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Baile and similar soils

Composition: 5 percent
Landform: Swales, depressions, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GmC—Glenville silt loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland
Note: In some areas the soil does not have fragic properties and the thickness of the surface soil can range up to 20 inches due to the recent deposition of soil material.

Component Description

Glenville and similar soils

Composition: 85 percent
Landform: Concave footslopes, toeslopes, and drainageways
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 7.32 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this

map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GnB—Glenville-Baile silt loams, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Glenville and similar soils

Composition: 50 percent
Landform: Concave footslopes, toeslopes, and drainageways
Slope: 0 to 8 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 7.32 inches
Note: In some areas the soil does not have fragic properties and the thickness of the surface soil can range up to 20 inches due to the recent deposition of soil material.

Baile and similar soils

Composition: 35 percent
Landform: Swales, depressions, and drainageways
Slope: 0 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 0.5 foot
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 10.75 inches

Additional Components

Glenelg and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GoB—Glenville-Codorus silt loams, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Note: Some areas east of Maryland Route 29 have a stony surface. This map unit can vary greatly, and in places, the soil does not have fragic properties.

Component Description

Glenville and similar soils

Composition: 60 percent
Slope: 0 to 8 percent
Landform: Concave footslopes, toeslopes, and drainageways
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 7.32 inches

Codorus and similar soils

Composition: 35 percent
Landform: Flood plains
Slope: 0 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Occasional
Available water capacity: Average of 7.0 inches

Additional Components

Manor and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

GuB—Glenville-Urban land-Udorthents complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Glenville and similar soils

Composition: 45 percent
Landform: Concave footslopes, toeslopes, and drainageways
Slope: 0 to 8 percent

Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 7.32 inches

Urban land

Composition: 35 percent
Landform: Summits and backslopes

Udorthents

Composition: 20 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Ha—Hatboro-Codorus silt loams, 0 to 3 percent slopes

Map Unit Setting

Landscape: River valley

Component Description

Hatboro and similar soils

Composition: 60 percent
Landform: Flood plains
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 0.5 foot
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Frequent
Available water capacity: Average of 8.2 inches

Codorus and similar soils

Composition: 35 percent
Landform: Flood plains
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Loamy alluvium derived from greenstone, quartzite, phyllite, schist, or diabase or from a combination of these
Flooding: Occasional
Available water capacity: Average of 7.1 inches

Additional Components

Glenville and similar soils

Composition: 5 percent
Landform: Concave footslopes, toeslopes, and drainageways

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Jackland Series

The Jackland series consists of very deep, somewhat poorly drained soils on upland flats and footslopes and in depressions on the Piedmont Province. These soils formed in material weathered from mixed mafic rocks. Permeability is very slow. Slope ranges from 0 to 8 percent.

Jackland soils are similar to Mount Lucas soils and are adjacent to Legore and Montalto soils. Legore and Montalto soils have a seasonal high water table at a depth of more than 40 inches. Legore soils are coarser textured than the Jackland soils, and Montalto soils have a red subsoil. The moderately well drained Mount Lucas soils average less than 35 percent clay throughout.

Typical Pedon

Jackland silt loam, 0 to 3 percent slopes, in a wooded area, in the city of Baltimore, Maryland; in Park Heights; about 200 feet northwest of the corner of Kennison Avenue and Bowers Avenue.

A—0 to 8 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many very fine and fine roots; 5 percent cobbles; moderately acid; clear smooth boundary.

Bt1—8 to 29 inches; brown (10YR 5/3) clay; weak medium angular blocky structure; firm; few fine roots; few faint and distinct clay films; many medium prominent yellowish brown (10YR 5/6) iron accumulations as soft masses; many medium faint light gray (10YR 5/2) iron depletions; 2 percent angular gravel; neutral; gradual smooth boundary.

Bt2—29 to 41 inches; brown (10YR 5/3) clay; weak medium angular blocky structure; firm; many faint and distinct clay films; many strong brown (7.5YR 5/6) iron accumulations as soft masses; medium prominent light gray (5Y 6/1) iron depletions; 2 percent angular gravel; slightly alkaline; gradual smooth boundary.

C—41 to 65 inches; dark yellowish brown (10YR 4/6) clay loam; massive; friable; many medium prominent gray (10YR 5/1) iron depletions; 2 percent angular gravel; neutral.

Range in Characteristics

The thickness of the solum ranges from 30 to 48 inches. The depth to bedrock is 60 inches or more. The content of rock fragments ranges from 0 to 15 percent, by volume, in the A and B horizons and from 0 to 30 percent, by volume, in the C horizon. In unlimed areas reaction is very strongly acid to moderately acid in the surface layer and very strongly acid to moderately alkaline in the rest of the profile.

The A horizon has hue of 10YR or 7.5YR, value of 3 to 5, and chroma of 1 to 4. The fine-earth fraction is silt loam or loam.

The Bt horizon has hue of 10YR or 7.5YR, value of 4 or 5, and chroma of 3 to 6. The fine-earth fraction is clay. This horizon has many fine and medium, prominent iron

depletions with chroma of 2 or less. Iron depletions and concentrations are common throughout the horizon.

The C horizon is commonly variegated in shades of brown, yellow, white, green, and black. The fine-earth fraction is sandy clay loam, clay loam, or sandy loam. Iron depletions and concentrations are common throughout the horizon. Some pedons have fragments of saprolite.

JaB—Jackland silt loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Jackland and similar soils

Composition: 85 percent
Landform: Saddles, swales, and upland flats
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Somewhat poorly drained
Depth to a seasonal high water table: 1 to 2 feet
Parent material: Clayey residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.6 inches

Additional Components

Mount Lucas and similar soils

Composition: 10 percent
Landform: Saddles, swales, and upland flats

Legore and similar soils

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LaB—Legore silt loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland
Note: Some areas east of Maryland Route 29 have remnant coastal plain sediment caps.

Component Description

Legore and similar soils

Composition: 85 percent
Landform: Summits and backslopes

Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Montalto and similar soils
Composition: 10 percent
Landform: Summits and backslopes

Gladstone and similar soils

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LaC—Legore silt loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland
Note: Some map units east of Maryland Route 29 have remnant coastal plain sediment caps.

Component Description

Legore and similar soils

Composition: 85 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Montalto and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Gladstone and similar soils

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LeB—Legore silt loam, 3 to 8 percent slopes, stony

Map Unit Setting

Landscape: Upland
Note: Some areas east of Maryland Route 29 have remnant coastal plain sediment caps.

Component Description

Legore and similar soils

Composition: 85 percent
Landform: Summits, backslopes, and ridges
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Montalto and similar soils

Composition: 10 percent
Landform: Summits, backslopes, and ridges

Gladstone and similar soils

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LeC—Legore silt loam, 8 to 15 percent slopes, stony

Map Unit Setting

Landscape: Upland
Note: Some map units east of Maryland Route 29 have remnant coastal plain sediment caps.

Component Description

Legore and similar soils

Landform: Summits, backslopes, and ridges

Composition: 85 percent
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Additional Components

Montalto and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Gladstone and similar soils

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Montalto Series

The Montalto series consists of very deep, well drained soils on summits, backslopes, and ridges. These soils formed in residuum derived from basic igneous rocks. Permeability is moderate or moderately slow. Slope ranges from 3 to 25 percent.

Montalto soils are similar to Legore soils and are adjacent to Bannertown, Gladstone, Jackland, Manor, Mount Lucas, Relay, and Watchung soils. Legore and Relay soils have less than 35 percent clay in the particle-size control section and are in similar landscape positions. The moderately well drained Mount Lucas, somewhat poorly drained Jackland, and poorly drained Watchung soils formed in residuum derived from similar rocks. They are in upland drainage swales and on concave footslopes and slightly concave upland flats. The moderately deep Bannertown and very deep Gladstone soils formed in residuum derived from gneiss and granitic gneiss. They are in areas adjacent to the Montalto soils. The very deep Manor soils formed in residuum derived from micaceous schist. They contain much more mica than the Montalto soils and average less than 18 percent clay throughout. Relay soils have more than 60 percent base saturation.

Typical Pedon

Montalto gravelly silt loam, 3 to 8 percent slopes, in Frederick County, Maryland; about 2,200 feet north and 300 feet west of Tract Road; lat. 39 degrees 43 minutes 05 seconds N. and long. 77 degrees 20 minutes 28 seconds W., NAD 83.

Oi—0 to 1 inch; partially decomposed leaf litter.

Ap—1 to 4 inches; dark brown (7.5YR 3/2) gravelly silt loam; strong medium subangular blocky structure parting to strong fine subangular blocky; friable; many medium roots throughout; many fine tubular pores; 15 percent gravel; strongly acid; abrupt smooth boundary.

BE—4 to 8 inches; yellowish red (5YR 4/6) silt loam; moderate medium subangular blocky structure; friable; many fine roots; many fine and medium vesicular and tubular pores; few discontinuous faint reddish brown (5YR 4/4) clay films on faces of peds; 2 percent gravel, 5 percent cobbles, and 5 percent stones; strongly acid; clear wavy boundary.

Bt1—8 to 14 inches; red (2.5YR 4/8) silty clay loam; moderate medium subangular blocky structure parting to moderate thin platy; friable; many fine and medium and common coarse roots; many medium and common coarse tubular pores; few black (N 2.5/) manganese stains and few red (2.5YR 4/6) clay films on faces of peds and in pores; 2 percent gravel; moderately acid; clear wavy boundary.

Bt2—14 to 32 inches; red (2.5YR 4/8) silty clay; moderate coarse prismatic structure parting to moderate medium subangular blocky parting to moderate thin platy; friable; common fine roots throughout; many medium tubular pores; few discontinuous prominent black (N 2.5/) manganese or iron and manganese stains on faces of peds; moderately acid; gradual wavy boundary.

Bt3—32 to 43 inches; red (2.5YR 4/6) silty clay loam; many medium and coarse yellowish red (5YR 5/6) mottles throughout; moderate thin platy structure; friable; many fine and medium roots throughout; few discontinuous faint black (N 2.5/) manganese stains on faces of peds; 5 percent gravel; moderately acid; gradual wavy boundary.

BC—43 to 85 inches; red (2.5YR 4/8) silty clay loam; weak thin platy structure; friable; many fine and common medium roots throughout; few prominent discontinuous black (N 2.5/) manganese stains on faces of peds; moderately acid; gradual wavy boundary.

Range in Characteristics

The thickness of the solum ranges from 40 to 60 inches. The depth to bedrock ranges from 5 to 12 feet. Rock fragments ranging in size from pebbles to boulders are in any or all parts of many pedons but do not exceed 30 percent, by volume. In some pedons stones cover up to 15 percent of the surface layer. Reaction is very strongly acid to slightly acid and acidity decreases with depth.

The A horizon has hue of 5YR or 7.5YR, value of 3 or 4, and chroma of 2 to 4. The fine-earth fraction is loam, silt loam, or silty clay loam.

The B horizon has hue of 10R to 5YR, value of 3 or 4, and chroma of 4 to 8. The fine-earth fraction of the BE horizon is silt loam or silty clay loam and that of the Bt horizon is dominantly clay or silty clay. The Bt horizon may include a subhorizon of silty clay loam or clay loam that has a high content of silt and a low content of sand.

The C horizon has a variegated matrix in many pedons. The fine-earth fraction is silt loam, loam, clay loam, or silty clay loam.

LmB—Legore-Montalto silt loams, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Note: Some map units east of Maryland Route 29 have remnant coastal plain sediment caps.

Component Description

Legore and similar soils

Composition: 55 percent

Landform: Summits, backslopes, and ridges

Slope: 3 to 8 percent

Texture of the surface layer: Silt loam

Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Montalto and similar soils

Composition: 30 percent
Landform: Summits and backslopes
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 9.4 inches

Additional Components

Gladstone and similar soils

Composition: 15 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LoB—Legore-Montalto-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Legore and similar soils

Composition: 40 percent
Landform: Summits, backslopes, and ridges
Slope: 0 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Montalto and similar soils

Composition: 35 percent
Landform: Summits, backslopes, and ridges

Slope: 0 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 9.4 inches

Urban land

Composition: 20 percent
Landform: Summits, backslopes, and ridges

Additional Components

Udorthents

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LoC—Legore-Montalto-Urban land complex, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Legore and similar soils

Composition: 40 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.2 inches

Montalto and similar soils

Composition: 30 percent
Landform: Summits, backslopes, and ridges
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet

Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 9.4 inches

Urban land

Composition: 20 percent
Landform: Summits, backslopes, and ridges

Additional Components

Udorthents

Landform: Summits and backslopes
Composition: 10 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Relay Series

The Relay series consists of very deep, well drained soils on narrow ridges and side slopes on the Piedmont Province. These soils formed in material weathered from mixed mafic rocks. Permeability is moderate. Stones cover 0 to 3 percent of the surface. Slope ranges from 0 to 65 percent.

Relay soils are similar to Legore soils and are adjacent to Bannertown, Gladstone, Jackland, Manor, Montalto, Mount Lucas, and Watchung soils. Legore soils average less than 60 percent base saturation. Montalto soils average more than 35 percent clay throughout. The moderately well drained Mount Lucas, somewhat poorly drained Jackland, and poorly drained Watchung soils formed in residuum derived from similar rocks. They are in upland drainage swales and on concave footslopes and slightly concave upland flats. The moderately deep Bannertown and very deep Gladstone soils formed in residuum derived from gneiss and granitic gneiss. They are in adjacent areas on the landscape. The very deep Manor soils formed in material derived from micaceous schist. They contain much more mica than the Relay soils and average less than 18 percent clay throughout.

Typical Pedon

Relay silt loam, 15 to 25 percent slopes, very stony, in a wooded area, in the city of Baltimore, Maryland; about 200 feet northwest of the turnaround on the dead end of Briarclift Road, in Gwynns Falls Park.

Oe—0 to 1 inch; black, partly decomposed leaves and twigs.

A—1 to 6 inches; very dark grayish brown (2.5Y 3/2) silt loam; moderate medium granular structure; friable; many very fine, fine, medium, and coarse roots; 5 percent cobbles; moderately acid; clear smooth boundary.

E—6 to 15 inches; olive brown (2.5Y 4/4) silt loam; moderate medium subangular blocky structure; friable; common very fine, fine, and medium roots; 2 percent angular gravel; moderately acid; gradual smooth boundary.

Bt—15 to 30 inches; olive brown (2.5Y 4/4) silt loam; moderate medium subangular blocky structure; friable; few faint clay films on faces of peds; common very fine, fine, medium, and coarse roots; 2 percent angular gravel; moderately acid; gradual wavy boundary.

BC—30 to 40 inches; dark yellowish brown (10YR 4/4) loam; weak coarse subangular blocky structure; friable; common fine roots; 2 percent angular saprolitic gravel; strongly acid; clear wavy boundary.

C—40 to 65 inches; olive (5Y 4/4) sandy loam; massive; firm; few fine roots; inherited rock structure in some places; neutral.

Range in Characteristics

The thickness of the solum ranges from 20 to 40 inches. The depth to bedrock ranges from 5 to 7 feet. In unlimed areas reaction is moderately acid to very strongly acid in the solum and moderately acid to neutral in the substratum. The content of rock fragments ranges from 0 to 15 percent, by volume, in individual horizons throughout the soil. The rock fragments range from pebbles to boulders in size.

The A horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 4. The fine-earth fraction is loam or silt loam.

The E horizon, if it occurs, has hue of 10YR or 2.5Y, value of 4 or 5, and chroma of 2 to 4. The fine-earth fraction is loam or silt loam.

The Bt horizon has hue of 2.5Y or 5Y, value of 4 or 5, and chroma of 3 to 6. The fine-earth fraction is silt loam, loam, or silty clay loam.

The BC and C horizons have hue of 10YR, 2.5Y, 5Y, or 5G; value of 3 to 7; and chroma of 2 to 6. In most pedons the fine-earth fraction has abrupt differences in texture ranging from silt loam to sandy loam.

LrD—Legore-Relay gravelly loams, 15 to 25 percent slopes, very stony

Map Unit Setting

Landscape: Upland

Component Description

Legore and similar soils

Composition: 55 percent
Landform: Summits, backslopes, and ridges
Slope: 15 to 25 percent
Texture of the surface layer: Gravelly loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Relay and similar soils

Composition: 30 percent
Landform: Summits and backslopes
Slope: 15 to 25 percent
Texture of the surface layer: Gravelly loam
Depth to a restrictive feature: More than 60 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 12.6 inches

Note: In some profiles, the soil does not have the clay accumulations that are typical of the Relay series.

Additional Components

Gladstone and similar soils

Composition: 15 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

LrF—Legore-Relay gravelly loams, 25 to 65 percent slopes, very stony

Map Unit Setting

Landscape: Upland

Component Description

Legore and similar soils

Composition: 55 percent
Landform: Summits, backslopes, and ridges
Slope: 25 to 65 percent
Texture of the surface layer: Gravelly loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 8.4 inches

Relay and similar soils

Composition: 30 percent
Landform: Summits and backslopes
Slope: 25 to 65 percent
Texture of the surface layer: Gravelly loam
Depth to a restrictive feature: More than 60 inches to bedrock (lithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 12.6 inches
Note: In some profiles, the soil does not have the clay accumulations that are typical of the Relay series.

Additional Components

Gladstone and similar soils

Composition: 15 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

Manor Series

The Manor series consists of very deep, well drained soils on uplands. These soils formed in material weathered from micaceous schist on the Piedmont Province. Permeability ranges from moderate to rapid. Slope ranges from 0 to 65 percent.

Manor soils are similar to Gaila soils and are adjacent to Bannertown, Brinklow, Gaila, Gladstone, Glenville, Glenelg, Legore, Montalto, Occoquan, and Relay soils. Gaila, Glenelg, and Occoquan soils average 18 to 35 percent clay throughout. The moderately deep Bannertown and very deep Gladstone soils formed in residuum derived from gneiss and granitic gneiss. They are in adjacent areas of the landscape. The moderately deep Brinklow soils average more than 18 percent clay throughout. They formed in residuum derived from phyllite and schist material. The moderately well drained Glenville soils are in concave upland drainage swales and on concave upland flats. Legore, Montalto, and Relay soils formed in residuum derived from diabase, diorite, and other related basic rocks. They average more than 18 percent clay throughout. Glenelg soils formed in residuum derived from micaceous schist.

Typical Pedon

Manor loam, in a wooded area, in Howard County, Maryland; in the Triadelphia Watershed, off Green Bridge Road and near the Pig Tail Boat Launch, Triadelphia Mill Road; in Karinwood; lat. 30 degrees 12 minutes 36 seconds N. and long. 77 degrees 00 minutes 13 seconds W., NAD 83.

A1—0 to 2 inches; very dark grayish brown (10YR 3/2) loam; strong fine granular structure; very friable; many fine and common medium roots; many fine and medium vesicular and tubular pores; 10 percent angular schist channers; strongly acid; clear smooth boundary.

A2—2 to 6 inches; dark yellowish brown (10YR 4/4) sandy loam; moderate medium subangular blocky and strong fine granular structure; very friable; many very fine, fine, and medium roots; many fine and medium vesicular and tubular and common coarse tubular pores; 2 percent angular schist channers; very strongly acid; clear wavy boundary.

Bw1—6 to 13 inches; strong brown (7.5YR 4/6) sandy loam; fine distinct dark yellowish brown (10YR 3/4) mottles; moderate medium subangular blocky structure; friable; many fine and common medium roots; many fine vesicular and tubular and common medium tubular pores; few distinct patchy dark yellowish brown (10YR 3/4) organic coatings on faces of peds and in pores; 10 percent angular schist channers; very strongly acid; clear wavy boundary.

Bw2—13 to 22 inches; strong brown (7.5YR 4/6) sandy loam; weak medium subangular blocky structure; friable; many fine and common medium roots; many fine vesicular and tubular pores; 10 percent angular schist channers; very strongly acid; abrupt smooth boundary.

C1—22 to 30 inches; variegated dark yellowish brown (10YR 4/4), strong brown (7.5YR 5/8), and yellowish red (5YR 4/6) sandy loam; moderate medium platy structure; very friable; many very fine and fine roots; many very fine and fine vesicular pores; 10 percent angular schist channers; strongly acid; clear wavy boundary.

C2—30 to 44 inches; variegated olive brown (2.5Y 4/4), strong brown (7.5YR 5/6), and pink (7.5YR 7/4) channery sand; massive; very friable; many very fine and fine vesicular pores; 15 percent channers and 40 percent parachanners; very strongly acid; clear wavy boundary.

C3—44 to 53 inches; variegated light olive brown (2.5Y 4/4), light brown (7.5YR 6/3), and yellowish red (5YR 5/8) channery loamy sand; moderate medium platy structure; very friable; many very fine and fine vesicular and tubular pores; 15 percent channers; very strongly acid; clear wavy boundary.

C4—53 to 72 inches; variegated light olive brown (2.5Y 4/4), strong brown (10YR 4/4), and reddish yellow (7.5YR 6/8) channery loamy sand; weak thin platy structure; very friable; 15 percent channers; very strongly acid.

Range in Characteristics

The thickness of the solum ranges from 10 to 30 inches. The depth to bedrock ranges from 6 to 10 feet or more. The content of rock fragments ranges from 0 to 30 percent, by volume, throughout the solum and from 0 to 50 percent, by volume, in the substratum. The fragments are mostly hard quartzite or flat schist. Stones cover 0 to 3 percent of the surface in some pedons. In unlimed areas reaction is strongly acid or very strongly acid throughout.

The A horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 4. The fine-earth fraction is loam, silt loam, sandy loam, or fine sandy loam.

The E horizon, if it occurs, has hue of 5YR to 10YR, value of 4 to 6, and chroma of 2 to 6. The fine-earth fraction is loam, sandy loam, or fine sandy loam.

The Bw horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is loam or sandy loam.

The C horizon has hue of 5YR to 2.5Y, value of 4 to 8, and chroma of 2 to 8 and commonly is variegated as a result of relict rock structure. The fine-earth fraction is loam, sandy loam, loamy sand, fine sandy loam, or sand.

MaB—Manor loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Manor and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 3 to 8 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Additional Components

Gaila and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Glenelg and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

MaC—Manor loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Manor and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Additional Components

Gaila and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Blocktown and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

MaD—Manor loam, 15 to 25 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Manor and similar soils

Composition: 85 percent

Landform: Summits and backslopes
Slope: 15 to 25 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Additional Components

Blocktown and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Gaila and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

McD—Manor loam, 15 to 25 percent slopes, very rocky

Map Unit Setting

Landscape: Upland

Component Description

Manor and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 15 to 25 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Additional Components

Blocktown and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Gaila and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

Bannertown Series

The Bannertown series consists of moderately deep, well drained soils on nearly level to steep narrow summits, shoulders, and backslopes. These soils formed in residuum derived from felsic crystalline rocks such as granite and gneiss. Permeability is moderately rapid. Slope ranges from 2 to 65 percent.

Bannertown soils are similar to Brinklow soils and are commonly in areas adjacent to Gladstone, Glenelg, and Manor soils. Brinklow soils formed in residuum derived from schist and phyllite. They average more than 18 percent clay throughout. The very deep Gladstone soils have an argillic horizon. The very deep Glenelg and Manor soils formed in residuum derived from micaceous schist.

Typical Pedon

Bannertown loam, 15 to 25 percent slopes, in Carroll County, Maryland; 0.75 mile east of the intersection of Marriottsville Road and the Patapsco River, and 1,200 feet north-northwest of the confluence of the North Branch and Patapsco Rivers in the McKeldin area of the Patapsco Valley State Park; lat. 39 degrees 21 minutes 11 seconds N. and long. 76 degrees 53 minutes 00 seconds W.

A—0 to 4 inches; very dark grayish brown (10YR 3/2) loam; moderate medium granular structure parting to moderate fine granular; friable; many fine and common medium roots; 5 percent gneiss gravel; very strongly acid; clear smooth boundary.

Bw1—4 to 11 inches; brown (7.5YR 4/4) sandy loam; weak medium subangular blocky structure parting to weak fine subangular blocky; friable; many fine, many medium, and few coarse roots; many fine tubular and vesicular pores; 10 percent gneiss gravel; strongly acid; clear smooth boundary.

Bw2—11 to 21 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure parting to weak fine subangular blocky; friable; few fine, medium, and coarse roots; many fine and medium and few coarse vesicular pores; 10 percent gneiss gravel; very strongly acid; clear smooth boundary.

C—21 to 34 inches; olive brown (2.5Y 4/4) gravelly sandy loam; common fine prominent gray (7.5YR 5/1) lithochromic features on faces of peds; massive; friable; few fine, medium, and coarse roots; many fine vesicular and common medium vesicular pores; 30 percent gneiss parachanners; very strongly acid; clear wavy boundary.

Cr—34 to 37 inches; partially weathered, moderately cemented gray gneiss.

R—37 inches; indurated slightly fractured gray gneiss.

Range in Characteristics

The thickness of the solum ranges from 20 to 35 inches. The depth to bedrock ranges from 20 to 40 inches. The content of rock fragments ranges from 5 to 35 percent, by volume, throughout. Reaction ranges from extremely acid to moderately acid.

The A horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 2 to 6. The fine-earth fraction is coarse sandy loam, sandy loam, fine sandy loam, or loam.

The E and BA horizons, if they occur, have hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 6. The fine-earth fraction is coarse sandy loam, sandy loam, fine sandy loam, or loam.

The Bw horizon has hue of 7.5YR to 2.5Y, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is coarse sandy loam, sandy loam, fine sandy loam, or loam.

The C horizon has hue of 7.5YR to 2.5Y, value of 3 to 8, and chroma of 4 to 8 or is variegated. The fine-earth fraction is coarse sandy loam, sandy loam, fine sandy loam, loamy sand, loamy fine sand, or loamy coarse sand.

MgD—Manor-Bannertown sandy loams, 15 to 25 percent slopes, rocky

Map Unit Setting

Landscape: Upland (fig. 9)
Note: Some areas of this map unit have an average of more than 35 percent rock fragments throughout the soil profile.

Component Description

Manor and similar soils

Landform: Summits and backslopes
Composition: 55 percent

Figure 9.—Typical landscape of Manor–Bannertown sandy loams, 15 to 25 percent slopes, rocky, in the Patapsco Valley State Park. Most of the acreage of this map unit is wooded because of the moderately steep slopes and the rock outcrop.

Slope: 15 to 25 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Bannertown and similar soils

Landform: Summits and backslopes
Composition: 35 percent
Slope: 15 to 25 percent
Texture of the surface layer: Sandy loam
Depth to a restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 3.8 inches

Additional Components

Gaila and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

MgF—Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky

Map Unit Setting

Landscape: Upland
Note: Some areas of this map unit have an average of more than 35 percent rock fragments throughout the soil profile.

Component Description

Manor and similar soils

Composition: 55 percent
Landform: Summits and backslopes
Slope: 25 to 65 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Bannertown and similar soils

Composition: 35 percent
Landform: Summits and backslopes
Slope: 25 to 65 percent
Texture of the surface layer: Sandy loam
Depth to a restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from granitic gneiss
Flooding: None
Available water capacity: Average of 3.0 inches

Additional Components

Gaila and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

MkF—Manor-Brinklow complex, 25 to 65 percent slopes, very rocky

Map Unit Setting

Landscape: Upland
Note: Some areas of this map unit have an average of more than 35 percent rock fragments throughout the soil profile.

Component Description

Manor and similar soils

Composition: 55 percent
Landform: Summits and backslopes
Slope: 25 to 65 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from schist and phyllite
Flooding: None
Available water capacity: Average of 8.41 inches

Brinklow and similar soils

Composition: 30 percent
Landform: Summits and backslopes
Slope: 25 to 65 percent
Texture of the surface layer: Channery loam
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet

Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 4.1 inches

Additional Components

Blocktown and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Gaila and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Mount Lucas Series

The Mount Lucas series consists of very deep, moderately well drained soils. These soils formed in material weathered from diabase and other dark basic rocks. Permeability is slow. Slope ranges from 0 to 15 percent.

Mount Lucas soils are adjacent to Legore, Montalto, and Watchung soils. The well drained Legore and Montalto soils are in upland landscape positions. The poorly drained Watchung soils are slowly permeable.

Typical Pedon

Mount Lucas silt loam, in a forested area, in Montgomery County, Maryland; near New Hanover Township, 0.5 mile northeast of Anise; near Hildebrand Road, 800 feet north of the intersection of Finn Road.

Oi—0 to 3 inches; leaves, twigs, and moss.
A—3 to 4 inches; very dark brown (10YR 2/2) silt loam; moderate very fine granular structure; very friable; 5 percent rock fragments up to 2 inches in diameter; moderately acid; abrupt wavy boundary.
E—4 to 9 inches; yellowish brown (10YR 5/4) silt loam; moderate fine granular structure; friable; 10 percent rock fragments up to 2 inches in diameter; moderately acid; clear wavy boundary.
BE—9 to 13 inches; dark yellowish brown (10YR 4/4) silt loam; weak fine subangular blocky structure; friable; 10 percent rock fragments up to 1 inch in diameter; moderately acid; clear wavy boundary.
Bt1—13 to 20 inches; strong brown (7.5YR 5/6) clay loam; moderate medium and fine subangular blocky structure; friable; common faint clay films on faces of peds; 10 percent rock fragments up to 1 inch in diameter; moderately acid; clear wavy boundary.
Bt2—20 to 34 inches; brown (7.5YR 4/4) clay loam; moderate medium subangular blocky structure; friable; common faint clay films on faces of peds and in pores; many medium and coarse prominent yellowish red (5YR 5/8) and red (2.5YR 4/6) iron accumulations as soft masses; grayish brown (10YR 5/2) iron depletions; 10 percent rock fragments; moderately acid; abrupt wavy boundary.
BC—34 to 38 inches; dark brown (7.5YR 4/4) clay loam; weak medium subangular blocky structure; friable; few faint clay films on faces of peds and in pores;

common medium distinct gray (10YR 6/1) iron depletions; common medium distinct yellowish red (5YR 5/6) iron accumulations as soft masses; 10 percent rock fragments; slightly acid; abrupt wavy boundary.

C1—38 to 54 inches; dark brown (7.5YR 4/4) gravelly clay loam and sandy loam; weak coarse subangular blocky structure; friable; few faint clay films on faces of peds; few medium distinct reddish brown (5YR 4/4) iron accumulations as soft masses; few medium prominent gray (10YR 5/1) iron depletions; 30 percent fragments of diabase; slightly acid; abrupt wavy boundary.

C2—54 to 60 inches; dark yellowish brown (10YR 4/4) gravelly loamy sand; single grain; loose; 25 percent fragments of weathered diabase; slightly acid.

Range in Characteristics

The thickness of the solum ranges from 25 to 50 inches. The depth to bedrock is more than 48 inches. The content of angular rock fragments of diabase and some quartzite and other rocks ranges from 0 to 30 percent, by volume, in the solum and from 5 to 60 percent, by volume, in the C horizon. Reaction in the upper part of the solum ranges from strongly acid to slightly acid and that in the lower part ranges from moderately acid to neutral. The dominant clay mineral is kaolinite with appreciable amounts of illite and montmorillonite.

The Ap horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 2 to 4. The fine-earth fraction is silt loam or loam.

The E and BE horizons, if they occur, have hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 6. The fine-earth fraction is silt loam, loam, or silty clay loam.

The Bt horizon has hue of 5YR or 7.5YR, value of 5 or 6, and chroma of 3 to 6. The fine-earth fraction ranges from silty clay loam to sandy clay loam and includes 18 to 30 percent clay. Iron depletions and accumulations are common at a depth of more than 20 inches.

The C horizon has hue of 7.5YR or 10YR, value of 4 or 5, and chroma of 3 to 6. The fine-earth fraction ranges from silt loam to loamy coarse sand. The depth to loamy sand is more than 40 inches. Iron depletions and accumulations are common.

MoB—Mount Lucas silt loam, 3 to 8 percent slopes, stony

Map Unit Setting

Landscape: Upland

Component Description

Mount Lucas and similar soils

Composition: 85 percent
Landform: Saddles, swales, and upland flats
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 60 to 99 inches to bedrock (lithic)
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 7.62 inches

Additional Components

Watchung soils

Composition: 10 percent
Landform: Flats

Legore soils

Composition: 5 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

MoC—Mount Lucas silt loam, 8 to 15 percent slopes, stony

Map Unit Setting

Landscape: Upland

Component Description

Mount Lucas and similar soils

Composition: 85 percent
Landform: Saddles, swales, and upland flats
Slope: 8 to 15 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 60 to 99 inches to bedrock (lithic)
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 7.62 inches

Additional Components

Legore and similar soils

Composition: 15 percent
Landform: Summits, backslopes, and ridges

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Occoquan Series

The Occoquan series consists of deep, well drained soils on broad ridgetops and backslopes in the uplands. These soils formed in material weathered from gneiss and schist. Permeability ranges from moderate to rapid. Slope ranges from 3 to 15 percent.

Occoquan soils are similar to Gaila soils and are adjacent to Baile, Blocktown, Brinklow, Glenelg, Glenville, and Manor soils. The poorly drained Baile and moderately well drained Glenville soils are in concave upland drainage swales and on concave upland flats. They have a seasonal high water table within a depth of

40 inches. Manor soils average less than 18 percent clay throughout, do not have an argillic horizon, and contain more mica throughout. Gaila and Glenelg soils are very deep, Blocktown soils are shallow, and Brinklow soils are moderately deep.

Typical Pedon

Occoquan loam, 3 to 8 percent slopes, in Montgomery County, Maryland; 0.5 mile north of Redland; about 1,400 feet north of the intersection of Muncaster Mill Road and Shady Grove Road.

Ap—0 to 8 inches; dark yellowish brown (10YR 4/4) loam; weak thick platy structure; friable; many fine roots; 10 percent channers; slightly acid; abrupt wavy boundary.
Bt—8 to 15 inches; yellowish brown (10YR 5/6) loam; weak coarse subangular blocky structure; friable; few fine roots; common prominent clay films on faces of peds; 10 percent channers; slightly acid; clear wavy boundary.
BC—15 to 24 inches; strong brown (7.5YR 5/8) sandy loam; weak medium subangular blocky structure; friable; few fine roots; few faint clay films lining pores; 5 percent channers; strongly acid; clear wavy boundary.
C—24 to 59 inches; brownish yellow (10YR 6/8) and strong brown (7.5YR 5/6) sandy loam; massive; very friable; 10 percent channers; strongly acid; abrupt wavy boundary.
Cr—59 inches; moderately cemented, weathered schist bedrock.

Range in Characteristics

The thickness of the solum ranges from 12 to 24 inches. The depth to weathered bedrock ranges from 40 to 60 inches. The depth to hard bedrock is more than 60 inches. The content of rock fragments ranges from 1 to 15 percent, by volume, throughout the profile. Mica flakes are common in the B and C horizons. In unlimed areas reaction ranges from extremely acid to strongly acid.

The A horizon has hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 2 to 4. The fine-earth fraction is loam or sandy loam.

The B horizon has hue of 5YR to 10YR, value of 5 or 6, and chroma of 4 to 8. The fine-earth fraction is loam, sandy loam, sandy clay loam, or clay loam.

The C horizon is multicolored in shades of red, yellow, brown, or white. The fine-earth fraction is loam, sandy loam, or loamy sand.

OcB—Occoquan loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Occoquan and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 3 to 8 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly residuum derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 6.18 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Brinklow and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

OcC—Occoquan loam, 8 to 15 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Occoquan and similar soils

Composition: 85 percent
Landform: Summits and backslopes
Slope: 8 to 15 percent
Texture of the surface layer: Loam
Depth to a restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly residuum derived from low base phyllite and schist
Flooding: None
Available water capacity: Average of 6.18 inches

Additional Components

Glenelg and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Brinklow and similar soils

Composition: 5 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Patapsco Series

The Patapsco series consists of very deep, somewhat excessively drained soils on nearly level to sloping interfluves on dissected uplands in the northern part of the

Atlantic Coastal Plain Province. These soils formed in sandy eolian deposits over loamy fluviomarine deposits. Permeability is rapid in the surface and subsurface layers and moderately rapid to moderately slow in the substratum. The seasonal high water table is at a depth of 40 to 72 inches. Slope ranges from 0 to 15 percent.

Patapsco soils are commonly in areas adjacent to Downer, Evesboro, Fallsington, and Fort Mott soils. Downer and Fallsington soils have a sandy surface soil that is less than 20 inches thick. Fallsington soils have a seasonal high water table within a depth of 10 inches. Evesboro soils are sandy throughout. Fort Mott soils have a sandy surface soil that ranges from 20 to 40 inches in thickness.

Typical Pedon

Patapsco sand, in a wooded area, in Anne Arundel County, Maryland; on Marley Neck, about 400 feet north of Tanyard Cove; about 1.2 miles southwest of the intersection of Marley Neck Road and Fort Smallwood Road (Route 173), about 1,200 feet northwest of Marley Neck Road; USGS Curtis Bay topographic quadrangle; lat. 39 degrees 10 minutes 40.4 seconds N. and long. 76 degrees 34 minutes 15.9 seconds W., NAD 83.

Ap1—0 to 3 inches; very dark gray (10YR 3/1) sand; single grain; loose, nonsticky and nonplastic; few very fine and fine and common medium roots throughout; neutral; abrupt irregular boundary.

Ap2—3 to 10 inches; dark yellowish brown (10YR 4/4) sand; single grain; loose, nonsticky and nonplastic; few very fine and fine roots throughout; neutral; abrupt wavy boundary.

E1—10 to 33 inches; yellowish brown (10YR 5/6) sand; single grain; loose, nonsticky and nonplastic; few very fine roots throughout; common medium and coarse tubular pores throughout; few fine charcoal fragments; slightly acid; gradual wavy boundary.

E2—33 to 45 inches; reddish yellow (7.5YR 6/6) sand; massive; loose, nonsticky and nonplastic; few very fine and medium roots throughout; moderately acid; clear wavy boundary.

E3—45 to 48 inches; reddish yellow (7.5YR 6/6) sand; massive; loose, nonsticky and nonplastic; common medium tubular pores throughout; common coarse and very coarse distinct yellowish red (5YR 4/6) rounded clay bodies throughout; strongly acid; clear wavy boundary.

E4—48 to 54 inches; strong brown (7.5YR 5/8) sand; massive; loose, nonsticky and nonplastic; strongly acid; clear wavy boundary.

E5—54 to 61 inches; strong brown (7.5YR 5/6) sand; massive; loose, nonsticky and nonplastic; strongly acid; clear wavy boundary.

Bt1—61 to 74 inches; yellowish red (5YR 4/6) sandy loam; moderate medium subangular blocky structure; friable, nonsticky and slightly plastic; many distinct yellowish red (5YR 4/6) clay bridges between sand grains; few distinct reddish yellow (7.5YR 6/8) clay films on vertical faces of peds; common coarse and very coarse distinct strong brown (7.5YR 5/8) iron masses throughout; few medium distinct white (10YR 8/1) rounded iron depletions throughout; very strongly acid; gradual wavy boundary.

Bt2—74 to 80 inches; loamy sand, 70 percent yellowish red (5YR 4/6) and 30 percent white (10YR 8/1); weak coarse subangular blocky structure; very friable, slightly sticky and moderately plastic; extremely acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from more than 60 inches to, typically, more than 80 inches. The thickness of the sandy surface soil ranges from 40 to 79 inches. The thickness of the solum is more than 60 inches. The depth to

bedrock is more than 72 inches. The depth to a seasonal high water table ranges from 40 to 72 inches. The content of coarse fragments ranges from 0 to 10 percent, by volume, throughout the profile. The fragments are rounded quartz gravel and cobbles and ironstone channers and flagstones. In unlimed areas reaction ranges from extremely acid to moderately acid throughout the profile. The E horizon in some pedons has subhorizons that contain lamellae. A lithologic discontinuity may occur below the argillic horizon with silty clay loam, clay loam, or silty clay below the contact.

The Ap or A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 1 to 4. The fine-earth fraction is loamy sand or sand.

The E, AE, or BE horizon, if it occurs, has hue of 5YR to 2.5Y, value of 4 to 7, and chroma of 3 to 8. The fine-earth fraction is sand, fine sand, or loamy sand.

The Bt or 2Bt horizon, if it occurs, has hue of 2.5YR to 5Y or is neutral. It has value of 3 to 7 and chroma of 0 to 8. The fine-earth fraction is loamy sand, sandy loam, or sandy clay loam. Most pedons have iron masses in shades of red, brown, or yellow and iron depletions in shades of olive or gray at a depth of more than 40 inches.

The Btg or 2Btg horizon, if it occurs, has hue of 10YR to 5Y or is neutral. It has value of 5 to 7 and chroma of 0 to 2. The fine-earth fraction is loamy sand, sandy loam, or sandy clay loam. Iron depletions in shades of olive, gray, or white and iron masses in shades of red, brown, or yellow are in most pedons.

The BC or 2BC horizon, if it occurs, has hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 to 8. The fine-earth fraction is loamy sand or sandy loam. Iron depletions in shades of olive, gray, or white and iron masses in shades of red, brown, or yellow are in most pedons.

The 2C horizon, if it occurs, has hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 to 8. The fine-earth fraction is sand, loamy sand, or fine sand. Iron depletions in shades of olive, gray, or white and iron masses in shades of red, brown, or yellow are in most pedons.

Fort Mott Series

The Fort Mott series consists of very deep, somewhat excessively drained soils on broad, nearly level to sloping interstream divides of dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in sandy eolian deposits over fluviomarine sediments. Permeability is moderate or moderately rapid. Slope ranges from 0 to 10 percent.

Fort Mott soils are similar to Downer soils and are commonly in areas adjacent to Evesboro, Fallsington, Hammonton, Patapsco, Sassafras, and Woodstown soils. Downer soils do not have a 20- to 40-inch-thick sandy surface soil. They have a coarse-loamy particle-size control section. The excessively drained Evesboro soils have a seasonal high water table at a depth of more than 72 inches. They do not have an argillic horizon. The poorly drained Fallsington soils have a seasonal high water table within a depth of 12 inches. They do not have a 20- to 40-inch-thick sandy surface soil. They have a fine-loamy particle-size control section. The moderately well drained Hammonton soils have a seasonal high water table at a depth of 18 to 42 inches. They do not have a 20- to 40-inch-thick sandy surface soil. They have a coarse-loamy particle-size control section. Patapsco soils have a higher content of clay below a depth of 40 inches than that of the Fort Mott soils. Sassafras soils do not have a 20- to 40-inch-thick sandy surface soil. They have a fine-loamy particle-size control section. The moderately well drained Woodstown soils have a seasonal high water table at a depth of 18 to 42 inches. They have a fine-loamy particle-size control

section and are in the slightly higher landscape positions. They do not have a 20- to 40-inch-thick sandy surface soil.

Typical Pedon

Fort Mott loamy sand, on a 4 percent slope, in a cultivated field, in Anne Arundel County, Maryland; about 3.1 miles northwest of Davidsonville; 2,850 feet south-southwest of the intersection of Governor Bridge Road and Sands Road, 600 feet east of Sands Road, 250 feet north of a farm lane; USGS Bowie topographic quadrangle; lat. 38 degrees 56 minutes 41 seconds N. and long. 76 degrees 40 minutes 41 seconds W., NAD 27.

Ap—0 to 12 inches; brown (10YR 4/3) loamy sand; weak medium platy structure parting to weak coarse angular blocky; very friable; many very fine and fine roots; 2 percent gravel; very strongly acid; abrupt smooth boundary.

BE—12 to 21 inches; yellowish brown (10YR 5/6) loamy sand; weak thin platy and weak coarse angular blocky structure; very friable; common very fine roots; few fine, medium, and coarse tubular pores; few fine mica flakes throughout; 2 percent gravel; moderately acid; clear wavy boundary.

Bt—21 to 33 inches; strong brown (7.5YR 4/6) sandy loam; weak medium subangular blocky structure; friable; common very fine and fine roots; few fine tubular pores; common fine mica flakes; moderately acid; clear wavy boundary.

BC1—33 to 40 inches; strong brown (7.5YR 4/6) sand; weak medium and coarse subangular blocky structure; very friable; few very fine roots; few fine tubular pores; common fine mica flakes throughout; moderately acid; clear wavy boundary.

BC2—40 to 50 inches; yellowish brown (10YR 5/6) sand; weak coarse subangular blocky structure; very friable; few very fine roots; few fine strong brown (7.5YR 4/6) lamellae; moderately acid; abrupt smooth boundary.

BC3—50 to 70 inches; banded yellowish brown (10YR 5/8), strong brown (7.5YR 4/6), and yellowish red (5YR 4/6) sand; weak thick platy structure; friable; few very fine roots; 0.25-inch- to 1.25-inch-thick discontinuous ironstone layer at top of horizon; moderately acid; gradual wavy boundary.

C—70 to 80 inches; light olive brown (2.5Y 5/3) loamy sand; massive; very friable; many coarse distinct yellowish brown (10YR 5/6) lamellae; common fine mica flakes throughout; very strongly acid.

Range in Characteristics

The thickness of the surface layer ranges from 21 to 38 inches. The depth to the base of the argillic horizon ranges from 33 to 60 inches. The content of gravel ranges from 0 to 5 percent, by volume, in the surface layer and subsoil and from 0 to 20 percent, by volume, in the substratum. The depth to a seasonal high water table is more than 72 inches. In unlimed areas reaction ranges from strongly acid to extremely acid.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 3. The fine-earth fraction is loamy sand, sand, or fine sand.

The E or BE horizon has hue of 7.5YR to 2.5Y, value of 3 to 6, and chroma of 3 to 8. The fine-earth fraction is loamy sand, sand, or loamy fine sand.

The Bt horizon has hue of 5YR or 7.5YR, value of 4 to 7, and chroma of 3 to 8. The fine-earth fraction is fine sandy loam, sandy loam, or sandy clay loam.

The BC horizon has hue of 5YR to 10YR, value of 4 to 8, and chroma of 3 to 8. The fine-earth fraction is fine sand, sand, loamy sand, or sandy loam.

The C horizon has hue of 7.5YR to 2.5Y, value of 5 to 7, and chroma of 3 to 8. The fine-earth fraction is sand or loamy sand with thin layers of sandy loam.

PfC—Patapsco-Fort Mott complex, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Patapsco and similar soils

Composition: 50 percent
Landform: Interfluve summits and backslopes
Slope: 5 to 10 percent
Texture of the surface layer: Sand
Depth to a restrictive feature: 49 inches to abrupt textural change
Drainage class: Excessively drained
Depth to a seasonal high water table: 3.3 to 6.0 feet
Parent material: Sandy deposits over fluviomarine sediments
Flooding: None
Available water capacity: Average of 4.3 inches

Fort Mott and similar soils

Composition: 40 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Loamy sand
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Sandy eolian deposits over fluviomarine sediments
Flooding: None
Available water capacity: Average of 5.49 inches
Note: This Fort Mott soil has a yellower surface layer and a redder substratum than those listed in the range in characteristics of the official series description.

Additional Components

Russett and similar soils

Composition: 10 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

RsB—Russett fine sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 85 percent
Landform: Divides

Slope: 2 to 5 percent
Texture of the surface layer: Fine sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Beltsville and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

RsC—Russett fine sandy loam, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 85 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Fine sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Beltsville and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

RsD—Russett fine sandy loam, 10 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 85 percent
Landform: Divides
Slope: 10 to 15 percent
Texture of the surface layer: Fine sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Additional Components

Sassafras and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Chillum and similar soils

Composition: 5 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Hambrook Series

The Hambrook series consists of very deep, moderately permeable, well drained soils. These soils formed in loamy fluviomarine sediments. They are on nearly level and gently sloping interstream divides on dissected uplands in the northern part of the Atlantic Coastal Plain Province. Permeability is moderate. Slope ranges from 0 to 15 percent.

Hambrook soils are similar to Sassafras soils and are commonly in areas adjacent to Alloway, Downer, Evesboro, Fort Mott, Patapsco, Phalanx, Russett, and Woodstown soils. Sassafras, Downer, and Fort Mott soils do not have a seasonal high water table within a depth of 72 inches; in addition, Fort Mott soils have a 20- to 40-inch-thick sandy surface layer. Evesboro soils are sandy throughout and are

rapidly permeable and excessively drained. Patapsco soils have a sandy surface soil that is more than 40 inches thick. Phalanx soils have an ironstone layer at a depth of 20 to 40 inches. Alloway, Russett, and Woodstown soils have a seasonal high water table within a depth of 20 to 40 inches.

Typical Pedon

Hambrook sandy loam, on a 6 percent slope, in a wooded area, in Anne Arundel County, Maryland; about 2.5 miles northeast of Glen Burnie; 2 miles northeast of the intersection of Maryland Route 648 (Baltimore-Annapolis Boulevard) and Marley Neck Road, 3,200 feet northwest of Marley Neck Boulevard; 200 feet east of Marley Creek; USGS Curtis Bay topographic quadrangle; lat. 39 degrees 10 minutes 43 seconds N. and long. 76 degrees 34 minutes 48 seconds W., NAD 27.

A—0 to 2 inches; dark brown (10YR 3/3) sandy loam; weak fine granular structure; very friable; common medium, coarse, and very fine roots throughout; strongly acid; clear smooth boundary.

BE—2 to 10 inches; yellowish brown (10YR 5/6) sandy loam; weak medium subangular blocky structure; very friable; common very fine and medium roots throughout; strongly acid; gradual smooth boundary.

Bt1—10 to 18 inches; brownish yellow (10YR 6/6) sandy loam; moderate medium subangular blocky structure; friable; common fine roots throughout; few distinct clay films on faces of peds; strongly acid; clear smooth boundary.

Bt2—18 to 26 inches; reddish yellow (7.5YR 6/6) sandy clay loam; moderate medium subangular blocky structure; friable, moderately plastic; common fine roots throughout; common fine and medium vesicular and tubular pores; common distinct clay films on faces of peds and in pores; strongly acid; gradual smooth boundary.

Bt3—26 to 41 inches; yellowish red (5YR 4/6) clay loam; weak coarse prismatic structure parting to moderate medium and coarse subangular blocky; friable; common fine and medium vesicular and tubular pores; common distinct clay films on faces of peds; common medium and coarse prominent strong brown (7.5YR 5/8) iron accumulations as soft masses; 3 percent rounded quartzite gravel; very strongly acid; gradual wavy boundary.

BC1—41 to 48 inches; fine sandy loam, 40 percent brownish yellow (10YR 6/8) and 40 percent reddish yellow (7.5YR 6/8); weak medium subangular blocky structure; friable; few distinct clay films on faces of peds and in pores; common medium distinct or prominent strong brown (7.5YR 5/6) iron accumulations as soft masses; common medium prominent brown (7.5YR 5/4) iron depletions; 3 percent rounded quartzite gravel; very strongly acid; clear smooth boundary.

BC2—48 to 55 inches; fine sandy loam, 40 percent brownish yellow (10YR 6/8) and 40 percent light gray (2.5Y 7/2); weak medium subangular blocky structure; very friable; few faint clay films on faces of peds; common medium faint to prominent yellowish brown (10YR 5/8) iron accumulations as soft masses; 3 percent rounded quartzite gravel; very strongly acid; clear smooth boundary.

2C—55 to 72 inches; strong brown (7.5YR 5/8) gravelly sandy loam; massive; 20 percent rounded gravel and cobbles; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 20 to 60 inches. The depth to a seasonal high water table ranges from 48 to 72 inches. In some pedons permeability is moderately slow or slow in the substratum. The content of coarse fragments of fine, rounded, mixed gravel ranges from 0 to 10 percent, by volume, in the surface layer and subsoil and from 0 to 20 percent, by volume, in the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid throughout.

The A or Ap horizon has hue of 10YR, value of 3 to 5, and chroma of 2 to 4. The fine-earth fraction is sandy loam, fine sandy loam, or loam.

The E or BE horizon, if it occurs, has hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 6. The fine-earth fraction is sandy loam, fine sandy loam, or loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 6 to 8. Iron masses in shades of red, brown, or yellow and iron depletions in shades of gray may occur in the lower part of this horizon. The fine-earth fraction is sandy loam, sandy clay loam, clay loam, or loam.

The BC horizon has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8. Iron masses in shades of red, brown, or yellow and iron depletions in shades of gray are in most pedons. The fine-earth fraction is loamy sand, sandy loam, or fine sandy loam.

The C or Cg horizon, if it occurs, has hue of 10YR to 5Y, value of 5 or 6, and chroma of 1 to 6. It may have iron masses in shades of red, brown, or yellow and iron depletions in shades of gray. The fine-earth fraction is commonly stratified and includes sand, loamy sand, and sandy loam.

The 2BC horizon, if it occurs, has hue of 7.5YR to 2.5Y, value of 4 to 7, and chroma of 4 to 8. The fine-earth fraction ranges from sand to sandy loam.

The 2C horizon, if it occurs, has hue of 10YR or 7.5YR, value of 4 to 6, and chroma of 6 to 8. The fine-earth fraction ranges from sand to sandy loam.

RtB—Russett-Alloway-Hambrook complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 50 percent
Landform: Divides
Slope: 0 to 5 percent
Texture of the surface layer: Fine sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Alloway and similar soils

Composition: 30 percent
Landform: Divides
Slope: 0 to 5 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Clayey fluviomarine sediments
Flooding: None
Available water capacity: Average of 11.34 inches

Hambrook and similar soils

Composition: 20 percent
Landform: Divides
Slope: 0 to 5 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: 3.3 to 6.0 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.2 inches
Note: This Hambrook soil has redder colors and more clay in the lower part of the Bt horizon than are allowed in the range in characteristics of the official series description.

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

RtC—Russett-Alloway-Hambrook complex, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 50 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Fine sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Alloway and similar soils

Composition: 30 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Clayey fluviomarine sediments
Flooding: None
Available water capacity: Average of 11.34 inches

Hambrook and similar soils

Composition: 20 percent
Slope: 5 to 10 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: 3.3 to 6.0 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.2 inches

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

RtD—Russett-Alloway-Hambrook complex, 10 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 60 percent
Landform: Divides
Slope: 10 to 15 percent
Texture of the surface layer: Fine sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Alloway and similar soils

Composition: 25 percent
Landform: Divides
Slope: 10 to 15 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Clayey fluviomarine sediments
Flooding: None
Available water capacity: Average of 11.34 inches

Hambrook and similar soils

Composition: 15 percent
Landform: Divides
Slope: 10 to 15 percent

Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: 3.3 to 6.0 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.2 inches

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Beltsville Series

The Beltsville series consists of very deep, moderately well drained soils on nearly level to sloping interstream divides of dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in silty eolian deposits over fluviomarine sediments. Permeability is slow or very slow. Slope ranges from 0 to 15 percent.

Beltsville soils are similar to Russett soils and commonly in areas adjacent to Chillum, Croom, Downer, Fallsington, Hammonton, Sassafras, and Woodstown soils. Chillum, Croom, Downer, Fallsington, Hammonton, Russett, Sassafras, and Woodstown soils do not have a fragipan. Chillum, Croom, and Sassafras soils are well drained, Russett and Woodstown soils are moderately well drained, and Fallsington soils are poorly drained.

Typical Pedon

Beltsville loam, in an area of Beltsville-Urban land complex, 0 to 8 percent slopes, in a vacant lot, in the city of Baltimore, Maryland; about 90 feet southwest of the corner of Springfield and Adrian Streets in Waverly.

Ap—0 to 12 inches; very dark grayish brown (2.5Y 3/2) loam; moderate fine subangular blocky structure; friable; many fine roots; slightly acid; gradual smooth boundary.

BE—12 to 20 inches; yellowish brown (10YR 5/6 and 5/4) silt loam; moderate medium subangular blocky structure; friable; common fine roots; strongly acid; gradual smooth boundary.

Bt—20 to 24 inches; light olive brown (2.5Y 5/4) silt loam; moderate coarse angular blocky structure; friable; few faint clay films on faces of peds; few fine roots; very strongly acid; clear smooth boundary.

Bx—24 to 45 inches; brownish yellow (10YR 6/6) silt loam that has thin lenses of sandy loam; strong very coarse prismatic structure; firm; common medium distinct yellowish brown (10YR 5/8) iron accumulations and light brownish gray (10YR 6/2) iron depletions; very strongly acid; gradual smooth boundary.

C—45 to 65 inches; mixed yellowish brown (10YR 5/8) and strong brown (7.5YR 5/6) sandy loam; massive; slightly firm; 10 percent fine rounded quartzite gravel; strongly acid.

Range in Characteristics

The thickness of the solum ranges from 40 to 64 inches. Depth to the fragipan ranges from 12 to 34 inches. The content of coarse fragments ranges from 0 to 5 percent, by volume, fine quartzite gravel in the solum and from 10 to 20 percent, by

volume, fine gravel in the C horizon. In unlimed areas reaction ranges from strongly acid to extremely acid.

The A horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. The fine-earth fraction is silt loam or loam.

The BE and Bt horizons have hue of 10YR or 2.5Y, value of 5 or 6, and chroma of 4 to 8. The fine-earth fraction is silt loam or silty clay loam.

The Bx horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 3 to 6. The fine-earth fraction is silt loam, loam, or clay loam.

The C horizon has variegations of many colors with hues ranging from 7.5YR to 2.5Y. The fine-earth fraction ranges from sandy loam to clay loam. The C horizon is stratified with those textures.

RuB—Russett and Beltsville soils, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 50 percent
Landform: Divides
Slope: 2 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Beltsville and similar soils

Composition: 35 percent
Landform: Divides and upland flats
Slope: 2 to 5 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Silty eolian deposits over fluviomarine sediments
Flooding: None
Available water capacity: Average of 8.3 inches

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Sassafras and similar soils

Composition: 5 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

RuC—Russett and Beltsville soils, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Russett and similar soils

Composition: 55 percent
Landform: Divides
Slope: 5 to 10 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.7 to 3.3 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.58 inches

Beltsville and similar soils

Composition: 30 percent
Landform: Divides and upland flats
Slope: 5 to 10 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Silty eolian deposits over fluviomarine sediments
Flooding: None
Available water capacity: Average of 8.3 inches

Additional Components

Sassafras and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Chillum and similar soils

Composition: 15 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Sassafras Series

The Sassafras series consists of very deep, well drained soils in ravines and on interstream divides, scarps, and terraces of deeply dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy fluviomarine sediments. Slope ranges from 0 to 60 percent.

Sassafras soils are adjacent to Beltsville, Chillum, Croom, Downer, Fallsington, Hammonton, Russett, and Woodstown soils. The moderately well drained Beltsville soils have a fragipan and are on landforms similar to those of the Sassafras soils. Chillum soils contain less than 15 percent fine sand or coarser and have more rock fragments in the substratum. Croom soils average more than 35 percent rock fragments throughout. Downer and Hammonton soils average less than 18 percent clay throughout. Fallsington soils are poorly drained. Russett and Woodstown soils are moderately well drained.

Typical Pedon

Sassafras fine sandy loam, on a 3 percent slope, in a wooded area, in Anne Arundel County, Maryland; about 2.25 miles north-northeast of Crownsville; 8,500 feet northeast of the intersection of Maryland Route 178 (Generals Highway) and Sunrise Beach Road; 900 feet southwest of the intersection of Sunrise Beach Road, Omar Drive, and Whitney's Landing Drive, 500 feet south of Sunrise Beach Road; USGS Round Bay topographic quadrangle; lat. 39 degrees 03 minutes 44 seconds N. and long. 76 degrees 35 minutes 29 seconds W., NAD 27.

A—0 to 3 inches; very dark gray (10YR 3/1) fine sandy loam; weak fine granular structure; very friable; many fine roots; very strongly acid; abrupt smooth boundary.

BE—3 to 18 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; many fine roots; very strongly acid; gradual smooth boundary.

Bt1—18 to 30 inches; dark yellowish brown (10YR 4/6) sandy clay loam; moderate coarse subangular blocky structure; firm; few fine roots; common distinct clay films on faces of peds; very strongly acid; gradual wavy boundary.

Bt2—30 to 39 inches; yellowish brown (10YR 5/6) sandy clay loam; moderate medium subangular blocky structure; firm; many distinct clay films on faces of peds; very strongly acid; clear smooth boundary.

BC—39 to 50 inches; dark yellowish brown (10YR 4/6) sandy clay loam; weak coarse subangular blocky structure; firm; common fine and medium prominent strong brown (7.5YR 5/6) iron accumulations as weakly cemented to moderately cemented masses and concretions; very strongly acid; clear smooth boundary.

C—50 to 72 inches; reticulately mottled yellowish brown (10YR 5/6), strong brown (7.5YR 4/6), and light yellowish brown (10YR 6/4) stratified fine sandy loam, loam, sandy clay loam, and silt loam; massive; friable; very strongly acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 25 to 45 inches. The depth to a seasonal high water table is more than 72 inches. The content of coarse fragments of ironstone channers and rounded quartzitic gravel ranges from 0 to 20 percent, by volume, in the surface layer and subsoil and from 0 to 30 percent, by volume, in the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid throughout the profile.

The A or Ap horizon has hue of 7.5YR or 10YR, value of 3 to 5, and chroma of 1 to 4. The fine-earth fraction is loamy sand, loamy fine sand, sandy loam, or fine sandy loam.

The E horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 2 to 4. The fine-earth fraction is loamy sand, sandy loam, or fine sandy loam.

The BE horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is fine sandy loam, sandy loam, or loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is sandy loam, sandy clay loam, or loam.

The BC horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 6 to 8. The fine-earth fraction is loamy sand, sandy loam, or sandy clay loam. Weakly cemented to strongly cemented fragments of ironstone are in many pedons.

The C horizon has hue of 7.5YR or 10YR, value of 4 to 8, and chroma of 4 to 8. The fine-earth fraction ranges from sand to sandy loam. Most pedons have redoximorphic iron masses in shades of brown or yellow. Weakly cemented to strongly cemented fragments of ironstone are in many pedons.

SaB—Sassafras loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Sassafras and similar soils

Composition: 85 percent
Landform: Scarps, ravines, terraces, and divides
Slope: 2 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches
Note: In some areas this soil includes stratified textures in the C horizon that are not typical of the Sassafras series.

Additional Components

Woodstown and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Chillum and similar soils

Composition: 5 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

SaC—Sassafras loam, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Sassafras and similar soils

Composition: 85 percent
Landform: Divides, ravines, scarps, and terraces
Slope: 5 to 10 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches
Note: In some areas this soil includes stratified textures in the C horizon that are not typical of the Sassafras series.

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Woodstown and similar soils

Composition: 5 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

SfB—Sassafras gravelly sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Sassafras and similar soils

Composition: 85 percent
Landform: Ravines, scarps, terraces, and divides
Slope: 2 to 5 percent
Texture of the surface layer: Gravelly sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet

Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches
Note: In some areas this soil includes stratified textures in the C horizon that are not typical of the Sassafras series.

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Woodstown and similar soils

Composition: 5 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

SrC—Sassafras and Croom soils, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Sassafras and similar soils

Composition: 55 percent
Landform: Ravines, scarps, divides, and terraces
Slope: 5 to 10 percent
Texture of the surface layer: Gravelly loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches
Note: In some areas this soil includes stratified textures in the C horizon that are not typical of the Sassafras series.

Croom and similar soils

Composition: 35 percent
Landform: Ravines and divides
Slope: 5 to 10 percent
Texture of the surface layer: Gravelly sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly fluviomarine deposits

Flooding: None
Available water capacity: Average of 4.19 inches

Additional Components

Russett and similar soils

Composition: 10 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

SrD—Sassafras and Croom soils, 10 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Sassafras and similar soils

Composition: 50 percent
Landform: Ravines, scarps, terraces, and divides
Slope: 10 to 15 percent
Texture of the surface layer: Gravelly loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches
Note: In some areas this soil includes stratified textures in the C horizon that are not typical of the Sassafras series.

Croom and similar soils

Composition: 35 percent
Landform: Divides and ravines
Slope: 10 to 15 percent
Texture of the surface layer: Gravelly sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly fluviomarine deposits
Flooding: None
Available water capacity: Average of 4.19 inches

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Russett and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

SrE—Sassafras and Croom soils, 15 to 25 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: In some areas slope is more than 25 percent.

Component Description

Sassafras and similar soils

Composition: 60 percent
Landform: Ravines, scarps, terraces, and divides
Slope: 15 to 25 percent
Texture of the surface layer: Gravelly loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches

Croom and similar soils

Composition: 30 percent
Landform: Divides and ravines
Slope: 15 to 25 percent
Texture of the surface layer: Gravelly sandy loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Gravelly fluviomarine deposits
Flooding: None
Available water capacity: Average of 4.19 inches

Additional Components

Chillum and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UaF—Udorthents, Highway, 0 to 65 percent slopes

Map Unit Setting

This map unit is on uplands. The soil material in this unit is highly disturbed, and many of the original soil characteristics have been altered. The cut and fill material is 1 foot to more than 20 feet thick. In places the map unit includes 10 to 20 percent soils from adjoining map units.

Component Description

Udorthents

Composition: 100 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UbF—Udorthents, Refuse, 0 to 65 percent slopes

Map Unit Setting

This map unit is on uplands. It consists of alternating layers of garbage and soil material that was trucked in from offsite to be used as capping material. The soil material is highly compacted.

Component Description

Udorthents

Composition: 100 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UcB—Urban land-Chillum-Beltsville complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Urban land

Composition: 45 percent
Landform: Divides

Chillum and similar soils

Composition: 35 percent
Landform: Divides

Slope: 0 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Silty eolian deposits over gravelly fluviomarine sediments
Flooding: None
Available water capacity: Average of 6.63 inches

Beltsville and similar soils

Composition: 15 percent
Landform: Divides
Slope: 0 to 5 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Silty eolian deposits over fluviomarine sediments
Flooding: None
Available water capacity: Average of 8.3 inches

Additional Components

Udorthents

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UcD—Urban land-Chillum-Beltsville complex, 5 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Urban land

Composition: 45 percent
Landform: Divides

Chillum and similar soils

Composition: 35 percent
Landform: Divides
Slope: 5 to 15 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Silty eolian deposits over gravelly fluviomarine sediments
Flooding: None

Available water capacity: Average of 6.63 inches

Beltsville and similar soils

Composition: 15 percent
Landform: Divides
Slope: 5 to 15 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Silty eolian deposits over fluviomarine deposits
Flooding: None
Available water capacity: Average of 8.3 inches

Additional Components

Udorthents

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils” (fig. 10). For additional information

Figure 10.—Typical cut in an area of Urban land-Chillum-Beltsville complex, 5 to 15 percent slopes. Providing adequate interpretations for this map unit is difficult because of the depth of cut and fill, which can exceed 10 feet in places.

specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UdB—Udorthents, loamy, 0 to 5 percent slopes

This map unit is on coastal plains. These nearly level to gently sloping soils consist mostly of loamy fill material that has been placed on soils having various drainage classes on terraces, uplands, and flood plains in the northern part of the Atlantic Coastal Plain Province. These soils are used as sites for roads, buildings, recreational facilities, and other development. Much of the acreage of this map unit has undergone significant cutting, filling, grading, and compacting during the construction of highways and their associated access ramps, drainage systems, and medians. The soil material used during the construction generally is local in origin and resembles the soils in adjacent map units. In areas where the original soil material was unsuited to a specific use, material may have been hauled in to complete the project.

Included in this map unit are areas used for storm water management and sediment control that may have steeper slopes, be frequently ponded, or have riprap on the surface. The depth to a seasonal high water table and the available water capacity vary. Permeability is generally slow due to the compaction of the soils. The hydrologic group assigned to these soils is D because the soils are generally compacted either intentionally or unintentionally by vehicle traffic. Reaction is generally very strongly acid or extremely acid. The chemical and physical properties of these soils vary greatly.

Establishing a vegetative cover for stabilization can be difficult because of a low level of soil fertility, acidic conditions, and compaction. A careful onsite investigation is needed to determine the potentials and limitations of areas of this map unit for any proposed land use.

These soils are not suited to agricultural uses or wildlife habitat, except in some of the included areas. These soils are not hydric, but some very small included areas may contain problematic hydric soils.

Component Description

Udorthents

Composition: 90 percent

Additional Components

Urban land

Composition: 10 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UfA—Urban land-Fallsington complex, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: In some areas this map unit is ponded for brief periods of time.

Component Description

Urban land

Composition: 50 percent
Landform: Drainageways

Fallsington and similar soils

Composition: 30 percent
Landform: Swales, divides, drainageways, and depressions
Slope: 0 to 2 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 1.0 foot
Parent material: Loamy fluviomarine sediments
Flooding: None

Additional Components

Udorthents

Composition: 20 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UoE—Udorthents, 0 to 45 percent slopes, Gravel Pits

Map Unit Setting

Landscape: Coastal plain

Component Description

Udorthents

Composition: 100 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Ur—Urban land

Component Description

Urban land

Composition: 85 percent

Additional Components

Udorthents

Composition: 15 percent

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

UsB—Urban land-Sassafras-Beltsville complex, 0 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Urban land

Composition: 50 percent
Landform: Divides

Sassafras and similar soils

Composition: 30 percent
Landform: Ravines, scarps, terraces, and divides
Slope: 0 to 5 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.2 inches

Beltsville and similar soils

Composition: 15 percent
Landform: Divides
Slope: 0 to 5 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Silty eolian deposits over fluviomarine deposits
Flooding: None
Available water capacity: Average of 8.3 inches

Additional Components

Udorthents

Composition: 5 percent

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

UsD—Urban land-Sassafras-Beltsville complex, 5 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Urban land

Composition: 50 percent
Landform: Upland flats

Sassafras and similar soils

Composition: 30 percent
Landform: Ravines, scarps, terraces, and divides
Slope: 5 to 15 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 9.2 inches

Beltsville and similar soils

Composition: 15 percent
Landform: Divides
Slope: 5 to 15 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 24 to 40 inches to a fragipan
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 2.5 feet
Parent material: Silty eolian deposits over fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.9 inches

Additional Components

Udorthents

Composition: 5 percent

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UtD—Urban land-Udorthents complex, 0 to 15 percent slopes

Map Unit Setting

Landscape: Coastal plain
Note: This highly complex map unit is on the Atlantic Coastal Plain Province. It consists mainly of areas that have been smoothed, where the original soil has

been disturbed, filled over, or otherwise destroyed prior to construction. Areas of this map unit identified as being on a flood plain in an earlier soil survey have been used as sites for community development. Most areas of this map unit are currently used as sites for warehouses, corporate office parks, and transportation facilities (fig. 11).

Component Description

Urban land

Composition: 60 percent
Landform: Upland flats

Udorthents

Composition: 40 percent
Landform: Upland flats

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UuB—Urban land-Udorthents complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland
Note: This map unit is on the Piedmont Province. It consists mainly of areas that have been smoothed, after the original soil has been disturbed, filled over, or otherwise destroyed prior to construction.

Figure 11.—This scene is typical of the acres of parking lots and large warehouse buildings associated with the Urban land–Udorthents complex, 0 to 15 percent slopes. Most of the acreage of this map unit is along the I-95/Route 1 corridor.

Component Description

Urban land

Composition: 60 percent
Landform: Upland flats

Udorthents

Composition: 40 percent
Landform: Upland flats

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

UuD—Urban land-Udorthents complex, 8 to 25 percent slopes

Map Unit Setting

Landscape: Upland
Note: This map unit is on the Piedmont Province. It consists mainly of areas that have been smoothed, after the original soil has been disturbed, filled over, or otherwise destroyed prior to construction.

Component Description

Urban land

Composition: 60 percent
Landform: Upland flats

Udorthents

Composition: 40 percent
Landform: Upland flats

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Woodstown Series

The Woodstown series consists of very deep, moderately well drained soils in open depressions and on interstream divides, pediments, scarps, and terraces of dissected uplands in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy fluviomarine sediments. Permeability is moderate. Slope ranges from 0 to 5 percent.

Woodstown soils are commonly in areas adjacent to Beltsville, Chillum, Croom, Fallsington, Russett, and Sassafras soils. The moderately well drained Beltsville soils have a fragipan. They are on landforms similar to those of the Woodstown soils. The well drained Croom soils average more than 35 percent rock fragments throughout. Fallsington soils are poorly drained, and Russett soils are moderately well drained.

The well drained Chillum and Sassafras soils are in the slightly higher landscape positions.

Typical Pedon

Woodstown sandy loam, on a 1 percent slope, in a wooded area, in Anne Arundel County, Maryland; about 0.6 mile north-northwest of Gambrills; 2,200 feet north-northeast of the intersection of Maryland Route 175 (Annapolis Road) and Burns Crossing Road; 3,200 feet north-northeast of the intersection of Maryland Route 175 and Gambrills Road; 800 feet east of Burns Crossing Road; USGS Odenton topographic quadrangle; lat. 39 degrees 04 minutes 34 seconds N. and long. 76 degrees 40 minutes 19 seconds W., NAD 27.

Oe—0 to 1 inch; very dark grayish brown (2.5Y 3/2) organic material.

A—1 to 3 inches; light olive brown (2.5Y 5/4) sandy loam; moderate fine granular structure; very friable; many fine and common medium roots; strongly acid; abrupt smooth boundary .

BE—3 to 8 inches; dark yellowish brown (10YR 4/6) sandy loam; weak fine subangular blocky structure; very friable; common fine and few medium, coarse, and very coarse roots; very strongly acid; clear smooth boundary.

Bt1—8 to 15 inches; dark yellowish brown (10YR 4/6) loam; moderate medium subangular blocky structure; friable; few fine and medium roots; few fine tubular pores; few faint yellowish brown (10YR 4/6) clay films on faces of peds; strongly acid; gradual wavy boundary.

Bt2—15 to 28 inches; dark yellowish brown (10YR 4/6) loam; moderate medium subangular blocky structure; friable; few fine roots; few fine tubular pores; few faint yellowish brown (10YR 4/6) clay films on faces of peds; few fine and medium prominent strong brown (7.5YR 5/6) accumulations as soft masses in the lower part of the horizon; very strongly acid; gradual smooth boundary .

BC—28 to 42 inches; dark yellowish brown (10YR 4/6) fine sandy loam; weak medium and coarse subangular blocky structure; friable; very few fine and medium roots; common fine distinct strong brown (7.5YR 4/6) soft masses in which iron has accumulated; common fine prominent light brownish gray (2.5Y 6/2) iron depletions; extremely acid; gradual wavy boundary.

C1—42 to 60 inches; dark yellowish brown (10YR 4/4) sandy loam; massive; friable; common medium prominent light brownish gray (2.5Y 6/2) iron depletions; extremely acid; gradual wavy boundary.

Cg—60 to 72 inches; light brownish gray (2.5Y 6/2) loamy sand; common medium prominent dark yellowish brown (10YR 4/4) iron accumulations as soft masses; single grain; loose; extremely acid.

Range in Characteristics

Depth to the base of the argillic horizon ranges from 25 to 45 inches. The depth to a seasonal high water table ranges from 20 to 40 inches. The content of rounded quartzitic gravel ranges from 0 to 15 percent, by volume, in the surface layer and subsoil, and from 0 to 20 percent, by volume, in the substratum. In unlimed areas reaction ranges from strongly acid to extremely acid throughout the profile.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 to 5, and chroma of 1 to 4. The fine-earth fraction is sandy loam, fine sandy loam, or loam.

The E horizon, if it occurs, has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 6. The fine-earth fraction is sandy loam, fine sandy loam, or loam.

The Bt horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is sandy clay loam or loam, or, less commonly, sandy loam, fine sandy loam, or clay loam. Redoximorphic iron masses in shades of red, brown, or yellow and iron depletions in shades of gray are in most pedons.

The BC horizon, if it occurs, has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is sandy loam, fine sandy loam, sandy clay loam, or loam. Redoximorphic iron masses in shades of red, brown, or yellow and iron depletions in shades of gray are in most pedons.

The BCg horizon, if it occurs, has hue of 10YR to 5Y or is neutral. It has value of 4 to 8 and chroma of 0 to 2. The fine-earth fraction is sand, loamy sand, or sandy loam and may contain thin strata of fine sandy loam, sandy clay loam, or loam. Redoximorphic iron masses in shades of red, brown, or yellow or iron depletions in shades of gray or white may be in the BCg horizon.

The C horizon, if it occurs, has hue of 10YR to 5Y, value of 4 to 8, and chroma of 3 to 8. The fine-earth fraction is sand, loamy sand, or sandy loam and may contain thin strata of finer textured material. Redoximorphic iron masses in shades of brown or yellow and iron depletions in shades of gray occur in most pedons.

The Cg horizon, if it occurs, has hue of 10YR to 5Y or is neutral. It has value of 4 to 8 and chroma of 0 to 2. The fine-earth fraction is sand, loamy sand, or sandy loam and may contain thin strata of finer textured material. Redoximorphic iron masses in shades of red, brown, or yellow or iron depletions in shades of gray may occur.

UwC—Urban land-Woodstown-Sassafras complex, 5 to 10 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Urban land

Composition: 50 percent
Landform: Divides

Woodstown and similar soils

Composition: 25 percent
Landform: Depressions, swales, terraces, and divides
Slope: 5 to 10 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.5 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.14 inches

Sassafras and similar soils

Composition: 20 percent
Landform: Divides, scarps, terraces, and ravines
Slope: 5 to 10 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.5 inches

Additional Components

Chillum and similar soils

Composition: 5 percent
Landform: Divides

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

W—Water

This map unit consists of areas inundated with water for most of the year and generally includes rivers, lakes, and ponds. No interpretations are given for this map unit.

Use and Management

This map unit is used for fishing, canoeing, and other recreational activities; as a source of municipal, rural, and irrigation water; and for flood and fire protection.

Watchung Series

The Watchung series consists of very deep, poorly drained soils in upland depressions and drainageways. These soils formed in residuum derived from basic igneous rock such as diabase. Permeability is slow. Slope ranges from 0 to 8 percent.

Watchung soils are adjacent to Legore, Montalto, and Mount Lucas soils. Legore and Montalto soils are well drained. Mount Lucas soils are moderately well drained.

Typical Pedon

Watchung silt loam, 0 to 8 percent slopes, in Frederick County, Maryland; about 1,000 feet west on Route 140 from Emmitsburg, directly west in a drainage area; lat. 39 degrees 43 minutes 05 seconds N. and long. 77 degrees 20 minutes 28 seconds W., NAD 83.

A—0 to 1 inch; black (10YR 2/1) mucky silt loam.
Ap—1 to 9 inches; brown (10YR 4/3) silt loam; moderate fine granular structure; friable; many fine and medium roots; strongly acid; clear wavy boundary.
Btg1—9 to 19 inches; gray (7.5YR 5/1) clay loam; strong medium prismatic and angular blocky structure; firm; common fine and medium roots between prisms; moderately acid; gradual wavy boundary.
Btg2—19 to 61 inches; dark grayish brown (2.5Y 4/2), bluish gray (5B 5/1), and strong brown (7.5YR 5/6) clay; strong coarse prismatic and angular blocky structure; firm; common fine roots between prisms; neutral; clear wavy boundary.
Bt—61 inches; strong brown (7.5YR 5/6) and dark grayish brown (2.5Y 4/2) clay loam; moderate coarse prismatic and weak thin platy structure; firm; neutral.

Range in Characteristics

The thickness of the solum ranges from 24 to 61 inches, and the depth to bedrock is more than 60 inches. The content of rock fragments ranges from 0 to 15 percent, by volume, throughout the profile, including up to 15 percent cobbles and stones.

The A horizon has hue of 10YR to 5Y, value of 3 to 5, and chroma of 1 to 4. The fine-earth fraction is loam, silt loam, or silty clay loam.

The Bt horizon has hue of 7.5YR to 5Y or is neutral. It has value of 4 to 6 and chroma of 0 to 3. The fine-earth fraction is clay, silty clay, or silty clay loam.

The C horizon, if it occurs, has hue of 7.5YR to 5Y or is neutral. It has value of 4 to 6 and chroma of 0 to 6. The fine-earth fraction is silt loam, loam, clay loam, or silty clay loam.

WaA—Watchung silt loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Watchung and similar soils

Composition: 85 percent
Landform: Saddles, swales, and upland flats
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 1 foot
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 9.0 inches

Additional Components

Mount Lucas and similar soils

Composition: 15 percent
Landform: Swales, saddles, and upland flats

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

WcB—Watchung silt loam, 3 to 8 percent slopes, stony

Map Unit Setting

Landscape: Upland

Component Description

Watchung and similar soils

Composition: 85 percent
Landform: Flats
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 1 foot
Parent material: Loamy residuum derived from diabase
Flooding: None
Available water capacity: Average of 9.0 inches

Additional Components

Mount Lucas and similar soils

Composition: 15 percent
Landform: Swales, saddles, and upland flats

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Wheaton Series

The Wheaton series consists of deep, well drained soils in areas that have been altered by heavy equipment. These soils formed in material weathered from schist and gneiss. Permeability is moderate. Slope ranges from 0 to 15 percent.

Typical Pedon

Wheaton silt loam, 0 to 8 percent slopes, in Montgomery County, Maryland; about 1 mile west of Wheaton; 0.25 mile east on Veirs Mill Road from its intersection with Aspen Hill Road, then 2,000 feet south on the entrance road to Parklawn Cemetery and 750 feet west of the road.

Ap—0 to 6 inches; very dark grayish brown (10YR 3/2) silt loam; moderate medium granular structure; friable; many fine roots; about 10 percent gravel; strongly acid; abrupt wavy boundary.
C1—6 to 13 inches; strong brown (7.5YR 5/6) loam; massive; friable; common fine roots; few fine pores; about 10 percent gravel; strongly acid; clear wavy boundary.
C2—13 to 20 inches; brown (7.5YR 4/4) loam; massive; friable; about 10 percent gravel; very strongly acid; gradual wavy boundary.
C3—20 to 38 inches; strong brown (7.5YR 5/8) loam; massive; friable; about 10 percent gravel; very strongly acid; gradual wavy boundary.
C4—38 to 68 inches; yellowish red (5YR 5/8) loam; massive; friable; about 10 percent gravel; very strongly acid.

Range in Characteristics

The thickness of the A horizon ranges from 2 to 10 inches. The depth to bedrock is more than 5 feet. The content of rock fragments ranges from 2 to 15 percent, by volume, throughout the profile. The fine-earth fraction has more than 50 percent silt and very fine sand. In unlimed areas reaction ranges from moderately acid to very strongly acid.

The A horizon has hue of 5YR to 10YR, value of 3 to 5, and chroma of 2 to 6. The fine-earth fraction is silt loam, loam, or fine sandy loam.

The C horizon has hue of 5YR to 10YR, value of 4 or 5, and chroma of 4 to 8. The fine-earth fraction is silt loam, loam, fine sandy loam, sandy loam, loamy sand, or sand. Some textures are coarser than defined by the central concept.

WgB—Wheaton-Glenelg complex, 0 to 8 percent slopes

Map Unit Setting

Landscape: Upland
Note: Most areas of this map unit are used as golf courses.

Component Description

Wheaton and similar soils

Composition: 60 percent
Landform: Summits and backslopes
Slope: 0 to 8 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite, schist, and gneiss and altered by the use of heavy equipment
Flooding: None
Available water capacity: Average of 9.1 inches

Glenelg and similar soils

Composition: 40 percent
Landform: Summits and backslopes
Slope: 0 to 8 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches
Note: In some areas this soil averages more than 35 percent clay.

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

WgD—Wheaton-Glenelg complex, 8 to 25 percent slopes

Map Unit Setting

Landscape: Upland
Note: Most areas of this map unit are used as golf courses.
Note: In most areas slope ranges from 8 to 15 percent.

Component Description

Wheaton and similar soils

Composition: 60 percent
Landform: Summits and backslopes
Slope: 8 to 25 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite, schist, and gneiss and altered by the use of heavy equipment
Flooding: None

Available water capacity: Average of 9.1 inches

Glenelg and similar soils

Composition: 40 percent
Landform: Summits and backslopes
Slope: 8 to 25 percent
Texture of the surface layer: Loam
Restrictive feature: None noted
Drainage class: Well drained
Depth to a seasonal high water table: More than 6 feet
Parent material: Loamy residuum derived from phyllite
Flooding: None
Available water capacity: Average of 9.6 inches

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Wiltshire Series

The Wiltshire series consists of very deep, moderately well drained soils in swales and drainageways. These soils formed in colluvium derived from micaceous schist over marble residuum. Permeability is slow. Slope ranges from 0 to 8 percent.

Wiltshire soils are in areas adjacent to Benevola, Glenelg, and Manor soils. Glenelg and Manor soils formed in residuum derived from mica schist. They have less than 35 percent base saturation. The well drained Benevola soils do not have a fragipan. They formed in residuum derived from marble.

Typical Pedon

Wiltshire silt loam, 0 to 8 percent slopes, in a pastured area, in Frederick County, Maryland; about 1 mile east of New Market; about 1,650 feet north of Maryland Route 144 and 650 feet west of Detrick Road; lat. 39 degrees 23 minutes 25 seconds N. and long. 77 degrees 14 minutes 40 seconds W., NAD 83.

Ap1—0 to 4 inches; dark yellowish brown (10YR 3/4) silt loam; strong fine granular structure; friable; many fine roots; 13 percent mixed igneous and metamorphic gravel; neutral; abrupt smooth boundary.

Ap2—4 to 10 inches; dark brown (7.5YR 3/3) gravelly silt loam; strong medium subangular blocky structure parting to strong medium granular; friable; many fine roots; 25 percent mixed igneous and metamorphic gravel; neutral; abrupt smooth boundary.

BE—10 to 15 inches; brown (7.5YR 4/4) gravelly silt loam; weak coarse subangular blocky structure; friable; many fine roots; many coarse tubular pores; few faint discontinuous brown (7.5YR 4/4) organic stains on faces of peds and in pores; 15 percent mixed igneous and metamorphic gravel; neutral; clear wavy boundary.

Bt—15 to 29 inches; yellowish brown (10YR 5/6) silt loam; common medium distinct light olive brown (2.5Y 5/4) mottles; moderate medium subangular blocky structure; friable; many fine roots throughout; many fine and common medium and coarse tubular pores; common faint clay films on faces of peds and in pores; few distinct strong brown (7.5YR 4/6) iron stains and few medium prominent black (N 2.5/) manganese accumulations as stains on faces of peds; 10 percent mixed igneous and metamorphic gravel; neutral; abrupt wavy boundary.

Bx—29 to 43 inches; dark yellowish brown (10YR 4/6) loam; weak coarse and very coarse prismatic structure parting to moderate medium platy; firm; common fine roots between peds; common fine vesicular and common very fine and fine tubular pores; common fine and medium distinct grayish brown (10YR 5/2) iron depletions between peds; common fine and medium distinct strong brown (7.5YR 4/6) soft plinthite nodules between peds; 12 percent subrounded mixed igneous and metamorphic gravel; slightly acid; abrupt wavy boundary.

2C1—43 to 51 inches; brown (7.5YR 4/4) very gravelly clay loam; weak thin platy structure; firm in place; friable; 45 percent mixed igneous and metamorphic gravel; slightly acid; abrupt smooth boundary.

2C2—51 to 62 inches; yellowish red (5YR 4/6) extremely gravelly loam; massive; friable; 60 percent mixed igneous and metamorphic gravel; slightly acid; clear smooth boundary.

2C3—62 to 98 inches; brown (7.5YR 4/4) extremely channery sandy loam; common coarse distinct reddish brown (5YR 4/4) mottles; massive; friable; 80 percent schist channers; slightly acid.

Range in Characteristics

The thickness of the solum ranges from 30 to 50 inches. The depth to bedrock is more than 5 feet. Depth to the fragipan ranges from 25 to 45 inches. Fragments of mixed igneous and metamorphic rocks such as phyllite, schist, calcareous schist and phyllite, and marble and greenstone range from 0 to 25 percent, by volume, in the horizons above the fragipan and from 25 to 80 percent, by volume, in the C horizon. Reaction ranges from strongly acid to neutral.

The Ap horizon has hue of 7.5YR or 10YR, value of 3 or 4, and chroma of 2 to 4. The fine-earth fraction is silt loam, loam, clay loam, or silty clay loam.

The BE horizon, if it occurs, has hue of 7.5YR or 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is silt loam or loam.

The Bt horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 6. The fine-earth fraction is silt loam, loam, clay loam, and silty clay loam.

The Bx horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is silt loam or loam. The depth to discontinuity ranges from 25 to 40 inches. Redoximorphic features are common throughout the horizon. Prism faces are about 7 to 12 inches apart.

The 2C horizon has hue of 5YR to 10YR, value of 4 to 6, and chroma of 4 to 8. The fine-earth fraction is loam, silt loam, sandy clay loam, or sandy loam.

WhA—Wiltshire silt loam, 0 to 3 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Wiltshire and similar soils

Composition: 85 percent
Landform: Swales, depressions, and drainageways
Slope: 0 to 3 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 28 to 40 inches to a fragipan; 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium over marble
Flooding: None

Available water capacity: Average of 8.51 inches

Additional Components

Benevola and similar soils

Composition: 10 percent
Landform: Summits and backslopes

Baile and similar soils

Composition: 5 percent
Landform: Depressions, drainageways, and swales

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

WhB—Wiltshire silt loam, 3 to 8 percent slopes

Map Unit Setting

Landscape: Upland

Component Description

Wiltshire and similar soils

Composition: 85 percent
Landform: Swales, depressions, and drainageways
Slope: 3 to 8 percent
Texture of the surface layer: Silt loam
Depth to a restrictive feature: 28 to 40 inches to a fragipan; 60 inches to bedrock (lithic)
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.0 feet
Parent material: Loamy colluvium over marble
Flooding: None
Available water capacity: Average of 8.51 inches

Additional Components

Benevola and similar soils

Composition: 15 percent
Landform: Summits and backslopes

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

WoA—Woodstown sandy loam, 0 to 2 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Woodstown and similar soils

Composition: 85 percent
Landform: Divides, depressions, terraces, and swales
Slope: 0 to 2 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.5 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.14 inches

Additional Components

Fallsington and similar soils

Composition: 10 percent
Landform: Drainageways, swales, and depressions

Sassafras and similar soils

Composition: 5 percent
Landform: Divides, scarps, and terraces

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

WoB—Woodstown sandy loam, 2 to 5 percent slopes

Map Unit Setting

Landscape: Coastal plain

Component Description

Woodstown and similar soils

Composition: 85 percent
Landform: Divides, depressions, terraces, and swales
Slope: 2 to 5 percent
Texture of the surface layer: Sandy loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1.5 to 3.5 feet
Parent material: Loamy fluviomarine sediments
Flooding: None
Available water capacity: Average of 7.14 inches

Additional Components

Sassafras and similar soils

Composition: 10 percent
Landform: Divides, scarps, and terraces

Fallsington and similar soils

Composition: 5 percent
Landform: Drainageways, swales, and depressions

Management

For general and detailed information about managing this map unit, see the section "Use and Management of the Soils." For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled "Tables."

Zekiah Series

The Zekiah series consists of very deep, poorly drained soils on flood plains of streams in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy alluvial sediments. Permeability is moderate. Slope ranges from 0 to 2 percent.

Zekiah soils are commonly in areas adjacent to Issue and Fallsington soils. Issue soils have a seasonal high water table within a depth of 20 to 36 inches. Fallsington soils have a fine-loamy particle-size control section and an argillic horizon. They are on the slightly higher landforms of adjacent low lying uplands.

Typical Pedon

Zekiah silt loam, on a 1 percent slope, in a field, in Anne Arundel County, Maryland; about 5.1 miles north-northeast of Laurel; 1,150 feet south of the intersection of Rockenbach Road and Cooper Avenue; 2,600 feet east-northeast of the intersection of Rockenbach Road and O'Brien Road; 7,800 feet east of the intersection of Maryland Route 295 (Gladys Noon Spellman Parkway) and Maryland Route 32 (Savage Road); 700 feet southeast of Rockenbach Road; USGS Laurel topographic quadrangle; lat. 39 degrees 06 minutes 40 seconds N. and long. 76 degrees 45 minutes 03 seconds W., NAD 83.

A1—0 to 4 inches; dark grayish brown (10YR 4/2) silt loam; weak fine granular structure; very friable; common very fine roots throughout; very strongly acid; clear smooth boundary.

A2—4 to 10 inches; olive brown (2.5Y 4/3) silt loam; weak fine granular structure; very friable; common very fine roots throughout; many fine prominent strong brown (7.5YR 4/6) iron accumulations as soft masses; very strongly acid; abrupt smooth boundary.

Cg—10 to 20 inches; olive gray (5Y 5/2) silt loam; massive; very friable; few very fine roots throughout; few fine prominent light olive brown (2.5Y 5/4) iron accumulations as soft masses; very strongly acid; clear irregular boundary.

CAg—20 to 35 inches; grayish brown (2.5Y 5/2) silt loam; massive; very friable; common medium or coarse fragments of woody material; very strongly acid; abrupt smooth boundary.

Ab1—35 to 48 inches; very dark gray (7.5YR 3/1) mucky silt loam; massive; very friable; strongly acid; gradual smooth boundary.

Ab2—48 to 60 inches; mucky silt loam, 60 percent very dark gray (7.5YR 3/1) and 40 percent very dark grayish brown (10YR 3/2); massive; very strongly acid; abrupt smooth boundary.

C'g1—60 to 66 inches; loam, 50 percent light gray (5Y 7/1) and 50 percent gray (2.5Y 5/1); massive; very friable; very strongly acid; abrupt smooth boundary.

C'g2—66 to 72 inches; white (2.5Y 8/1) sand; single grain; loose; strongly acid.

Range in Characteristics

The seasonal high water table is within a depth of 10 inches. These soils are subject to frequent flooding. The content of coarse fragments of rounded mixed gravel ranges from 0 to 5 percent, by volume, in the surface layer and subsoil and from 0 to 20 percent, by volume, in the substratum. Reaction ranges from strongly acid to extremely acid throughout the profile.

The A horizon has hue of 7.5YR to 2.5Y, value of 2 to 5, and chroma of 1 to 3. The fine-earth fraction is loam, silt loam, or mucky silty loam. Some pedons have redoximorphic iron masses in shades of red, brown, or yellow. Other pedons have layers of recent overwash as much as 20 inches thick that are loamy in texture and vary in color.

The Cg horizon has hue of 10YR to 5Y or is neutral. It has value of 4 to 7 and chroma of 0 to 2. The fine-earth fraction dominantly is loam or silt loam. In some pedons the Cg horizon contains stratified layers of loamy material, sand, gravel, or a combination of these textures. Redoximorphic iron masses in shades of red, brown, or yellow are in most pedons.

The Ab horizon has hue of 7.5YR to 2.5Y, value of 1 to 3, and chroma of 1 or 2. The fine-earth fraction is sandy loam, loam, or silt loam or the mucky analogs of those textures. Redoximorphic iron masses in shades of red, brown, or yellow or iron depletions in shades of gray or white are in some pedons. Other pedons have a sequence of buried A horizons.

The C'g horizon has hue of 10YR to 5B, value of 3 to 8, and chroma of 1 to 3. The fine-earth fraction ranges from coarse sand to loam. Redoximorphic iron masses in shades of red, brown, yellow, or olive and iron depletions in shades of gray are in most pedons.

Issue Series

The Issue series consists of very deep, somewhat poorly drained soils on flood plains in the northern part of the Atlantic Coastal Plain Province. These soils formed in loamy alluvium. Permeability is moderate. Slope ranges from 0 to 2 percent.

Issue soils are commonly in areas adjacent to Zekiah soils. Zekiah soils have a seasonal high water table within a depth of 10 inches.

Typical Pedon

Issue loam, 0 to 2 percent slopes, in a wooded area, in Anne Arundel County, Maryland; about 1.6 miles west of Owensville; 1.2 miles north of the intersection of Route 422 (Bayard Road) and Route 408 (Mt. Zion Marlboro Road); 2,400 feet north of the intersection of South Polling House Road and Route 422; on the flood plain north of Rock Branch; USGS Bristol topographic quadrangle; lat. 38 degrees 50 minutes 43.8 seconds N. and long. 76 degrees 37 minutes 36.1 seconds W., NAD 83.

A—0 to 3 inches; olive brown (2.5Y 4/3) loam; moderate coarse granular structure; very friable; many fine and medium roots throughout; common fine and medium prominent red (2.5YR 4/6) iron accumulations as soft masses throughout; moderately acid; gradual smooth boundary.

Bw1—3 to 15 inches; light olive brown (2.5Y 5/4) loam; weak medium granular structure; friable; common very fine and fine and few medium roots throughout; common medium and coarse prominent red (2.5YR 5/8) iron accumulations as soft masses throughout; common fine and medium faint light yellowish brown (2.5Y 6/3) iron depletions throughout; strongly acid; gradual smooth boundary.

Bw2—15 to 30 inches; light olive brown (2.5Y 5/3) loam; weak coarse subangular blocky structure; very friable; few fine and medium roots throughout; many fine

and medium prominent reddish brown (5YR 4/4) iron accumulations as soft masses throughout; common medium and coarse prominent gray (2.5Y 6/1) iron depletions throughout; strongly acid; clear smooth boundary.

Cg1—30 to 36 inches; gray (N 5/) loam; massive; very friable; common fine and medium roots; common medium and coarse prominent yellowish red (5YR 4/6) iron accumulations as soft masses throughout; very strongly acid; gradual smooth boundary.

Cg2—36 to 48 inches; gray (10YR 6/1) loamy fine sand; massive; very friable; common fine, medium, and coarse distinct very dark gray (10YR 3/2) organic stains; many coarse and very coarse prominent reddish yellow (7.5YR 6/8) iron accumulations as soft masses throughout; extremely acid; gradual smooth boundary.

Cg3—48 to 58 inches; light gray (N 7/) fine sand; single grain; loose; common medium and coarse prominent brownish yellow (10YR 6/6) iron accumulations as soft masses throughout; very strongly acid; clear wavy boundary.

Cg4—58 to 72 inches; grayish brown (10YR 5/2) fine sandy loam; common medium prominent black (N 2.5/) organic stains; massive; common medium and coarse distinct brownish yellow (10YR 6/6) iron accumulations as soft masses throughout; extremely acid.

Range in Characteristics

Depth to a seasonal high water table ranges from 10 to 20 inches. These soils are subject to frequent flooding. The content of coarse fragments of rounded mixed gravel ranges from 0 to 15 percent, by volume, throughout the profile. Some pedons have thin gravelly or sandy strata, and other pedons have sandy clay loam or clay loam at a depth of more than 40 inches. A few flakes of mica and dark, soft bodies or fine, black and brown concretions are in the C horizon. Some pedons have a buried A horizon at a depth of more than 20 inches. In unlimed areas reaction ranges from slightly acid to extremely acid.

The A or Ap horizon has hue of 10YR or 2.5Y, value of 3 or 4, and chroma of 2 to 4. The fine-earth fraction is loamy sand, sandy loam, fine sandy loam, loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, olive, or gray. The soil material with chroma of 2 is at a depth of 10 inches or more.

The Bw horizon has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 2 to 4. The fine-earth fraction is fine sand, loamy fine sand, sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of brown, olive, or gray. The soil material with chroma of 2 is at a depth of 10 inches or more.

The Bg horizon, if it occurs, is at a depth of more than 10 inches. It has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 or 2. The fine-earth fraction is fine sand, loamy fine sand, sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of olive or gray.

The BCg or BC'g horizon, if it occurs, has hue of 10YR or 2.5Y, value of 3 to 7, and chroma of 1 or 2. The fine-earth fraction is fine sand, loamy fine sand, sandy loam, fine sandy loam, loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of olive or gray.

The C or Cg horizon has hue of 10YR or 2.5Y or is neutral. It has value of 3 to 6 and chroma of 0 to 4. The fine-earth fraction is fine sand, loamy fine sand, sandy loam, fine sandy loam, loam, or silt loam. Redoximorphic features occur as iron masses in shades of red, yellow, or brown and iron depletions in shades of olive or gray.

The 2Ab horizon, if it occurs, has hue of 10YR or 2.5Y or is neutral. It has value of 3 to 6 and chroma of 0 to 4. The fine-earth fraction is fine sand, loamy fine sand,

sandy loam, fine sandy loam, loam, or silt loam. Redoximorphic features occur as iron masses in shades of black, red, yellow, or brown and iron depletions in shades of olive or gray.

ZbA—Zekiah and Issue soils, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

Landscape: Coastal plain

Component Description

Zekiah and similar soils

Composition: 50 percent
Landform: Flood plains
Slope: 0 to 2 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Poorly drained
Seasonal high water table: Within a depth of 1 foot
Parent material: Loamy alluvial deposits
Flooding: Frequent
Available water capacity: Average of 9.65 inches

Issue and similar soils

Composition: 40 percent
Landform: Flood plains
Slope: 0 to 2 percent
Texture of the surface layer: Silt loam
Restrictive feature: None noted
Drainage class: Moderately well drained
Depth to a seasonal high water table: 1 to 3 feet
Parent material: Loamy alluvial deposits
Flooding: Occasional
Available water capacity: Average of 10.2 inches

Additional Components

Fallsington and similar soils

Composition: 10 percent
Landform: Drainageways, swales, and depressions

Management

For general and detailed information about managing this map unit, see the section “Use and Management of the Soils.” For additional information specific to this map unit, such as the thickness and texture of the horizons, see the appropriate table in the section entitled “Tables.”

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for agricultural waste management. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact

on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland and other important farmland are described.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading "Soil Series and Detailed Soil Map Units." Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 6. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 6 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils are generally grouped at three levels—capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

The capability classification of map units in this survey area is given in the yields table.

Prime Farmland and Other Important Farmland

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation's food supply.

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those

needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

About 53,745 acres, or 33.2 percent of the survey area, would meet the requirements for prime farmland if an adequate and dependable supply of irrigation water were available.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

In some areas, land that does not meet the criteria for prime farmland is considered to be *farmland of statewide importance* for the production of food, feed, fiber, forage, and oilseed crops. The criteria for defining and delineating farmland of statewide importance are determined by the appropriate State agencies. Generally, this land includes areas of soils that nearly meet the requirements for prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some areas may produce as high a yield as prime farmland if conditions are favorable. Farmland of statewide importance may include tracts of land that have been designated for agriculture by State law. About 35,891 acres, or 22 percent of the total acreage in the county, meets the soil requirements for additional farmland of statewide importance.

The map units in the survey area that are considered prime farmland or farmland of statewide importance are listed in table 7. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in table 5. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described under the heading "Soil Series and Detailed Soil Map Units."

Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 8a, 8b, and 8c show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater

or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell

mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches.

As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Forest Productivity and Management

David Plummer, Maryland Forest Service, helped to prepare this section.

When Howard County was established in 1851, most of the land was forested. The predominant tree species were deciduous hardwoods, but some evergreen species were also included. As settlement progressed and the application of agricultural practices increased, the acreage used as forestland in the county began to decrease. It continued to decrease even further because of the improved means of transportation, advances in agriculture, commercial logging, and diseases such as chestnut blight and Dutch elm disease. Today, many of the native tree species have been replaced by pioneer species, which are those that are strong enough or robust enough to compete with grasses and other pioneer plants and can thrive in full sunlight since there are no other trees to shade them.

As of 1995, about one-third of Howard County was estimated to be forested. Most of this acreage is in publicly owned areas including, but not limited to, Patapsco Valley State Park, Patuxent State Park, Hugg Thomas Wildlife Management Area, and the Middle Patuxent Environmental Area. The remaining acreage of forestland is privately owned. It is mainly in areas that are either too wet or are too steep and stony to be used for agriculture.

Most of the forestland in the county is in areas of the Piedmont Plateau. Ridges and upper backslopes are dominated by chestnut, scarlet, black, and white oaks; hickory; and red maple. Common soils in these areas include those in the Glenelg, Occoquan, Gladstone, Manor, and Gaila series. Also included are the finer textured Montalto, Legore, and Benevola soils. Forests in areas ranging from the middle backslopes down to the footslopes are dominated by red and white oaks; yellow poplar; shagbark hickory; red and sugar maples; black cherry; and black walnut.

Common soils in these areas include those in the Relay, Legore, Brinklow, Blocktown, and Bannertown series. These soils commonly have stones at the soil surface and have slope of more than 25 percent. They occasionally are mapped with areas of rock outcrop. Trees in drainage areas and on flood plains include sycamore; yellow poplar; red and silver maples; black walnut; pin and swamp white oaks; locust; green ash; and boxelder. Soils common to these areas include those in the Glenville, Baile, Hatboro, Codorus, Wiltshire, Mt. Lucas, and Watchung series. The Mt. Lucas and Watchung soils commonly have fragments ranging in size from cobbles to boulders at the soil surface.

The forestland in areas of the Atlantic Coastal Plain Province is most affected by urbanization. The remaining forests are primarily along waterways or on wet uplands or are privately owned. Upland and lowland tree species are often closely associated because the soils vary. Trees associated with the dry uplands include white and chestnut oaks; laurel; yellow poplar; beech; sweet gum; and hickory. The understory commonly includes trees such as dogwood, serviceberry, and pawpaw. The soils included in these areas are those in the Evesboro, Downer, Chillum, Russett, Sassafras, Croom, and Beltsville series. Pitch pine and Virginia pine are common as plantations for reforestation. Trees on the lowlands and moist uplands include southern red oak, sweetgum, sycamore, green ash, hackberry, and red maple. Soils include those in the Alloway, Woodstown, Hammonton, and Fallsington series. Loblolly pine is common in plantations for reforestation.

Many factors influence the health and composition of present and future forests. Currently some of the more obvious threats include increasing population and development, improper forest management, invasive plants, disease, insects, and damage caused by deer browsing.

The gypsy moth and the decline of oak trees will likely continue to be a problem in oak dominated forests, eventually creating different structural and compositional changes within the forests.

The tables in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forest management.

Forest Productivity

In table 9, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged, unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forest Management

In tables 10a through 10d, interpretive ratings are given for various aspects of forest management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. *Well suited* indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified forest management practice (1.00) and the point at which the soil feature is not a limitation (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils for forest management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet (http://soils.usda.gov/technical/nfmanual/).

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to

unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Recreation

The land included in parks, recreational areas, and open spaces serves different purposes and has different characteristics. Parks or open space in Howard County that was acquired to protect environmental resources may not be suited to intensive recreational facilities. The potential for recreational activities in such areas may be limited to low-intensity or passive activities, such as hiking or nature study.

In 1999, Howard County recorded 3,387 acres of parkland, 2,410 acres of open space, and 1,711 acres of natural resource area. In the same year, there were 20 miles of bike trails, 13 miles of equestrian trails, and 34 miles of hiking trails on county-owned or leased land. Of the 3,387 acres of parkland in the county, only 889 acres has been developed for active recreational activities.

“The Howard County 1999 Comprehensive Recreation, Parks, and Open Space Plan” is the county’s primary document for determining needs and standards for parkland, open space, and recreation. Howard County exceeded the standard established by the National Recreation and Parks Association (NRPA) by setting aside more than 60 acres for every 1,000 people; the NRPA advocates 60 acres for every 1,000 residents be developed for active recreation.

The soils of the survey area are rated in tables 11a and 11b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all

of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 11a and 11b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of

vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Hydric Soils

Table 12 lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council 1995; Hurt, Whited, and Pringle 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others 1979; U.S. Army Corps of Engineers 1987; National Research Council 1995; Tiner 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register 2002). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” (Soil Survey Staff 1999) and “Keys to Soil Taxonomy”

(Soil Survey Staff 1998) and in the "Soil Survey Manual" (Soil Survey Division Staff 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt, Whited, and Pringle 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to

7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 13a and 13b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available

water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Tables 14a and 14b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If

the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Tables 15a and 15b give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 15a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

The soils are rated *good, fair,* or *poor* as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of

reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Water Management

Table 16 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect

performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Index Properties

Table 17 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

Physical Properties

Table 18 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In table 18, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In table 18, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 18, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil

properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Permeability (K_{sat}) refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 18, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors

being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.

3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.

5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.

6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.

8. Soils that are not subject to wind erosion because of rock fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Properties

Table 19 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliquivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliquivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory

analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Water Features

Table 20 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. Table 20 indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall

or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 21 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in

installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvial fan. The fanlike deposit of a stream where it issues from a gorge upon a plain or of a tributary stream near or at its junction with its main stream.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Arroyo. The flat-floored channel of an ephemeral stream, commonly with very steep to vertical banks cut in alluvium.

Aspect. The direction in which a slope faces.

Association, soil. A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Basal till. Compact glacial till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Bottom land. The normal flood plain of a stream, subject to flooding.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. The steep and very steep broken land at the border of an upland summit that is dissected by ravines.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. Very small, irregular terraces on steep hillsides, especially in pasture, formed by the trampling of cattle or the slippage of saturated soil.

Cement rock. Shaly limestone used in the manufacture of cement.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A slowly permeable soil horizon that contains much more clay than the horizons above it. A claypan is commonly hard when dry and plastic or stiff when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Congeliturbate. Soil material disturbed by frost action.

Conglomerate. A coarse grained, clastic rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coppice dune. A small dune of fine grained soil material stabilized around shrubs or small trees.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cuesta. A hill or ridge that has a gentle slope on one side and a steep slope on the other; specifically, an asymmetric, homoclinal ridge capped by resistant rock layers of slight or moderate dip.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Draw. A small stream valley that generally is more open and has broader bottom land than a ravine or gulch.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Extrusive rock. Igneous rock derived from deep-seated molten matter (magma) emplaced on the Earth's surface.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine earth. That portion of the soil consisting of particles less than 2 millimeters in diameter. Particles and rock fragments 2 millimeters in diameter or larger are not included.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. Area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Fluvial. Of or pertaining to rivers; produced by river action, as a fluvial plain.

Foothill. A steeply sloping upland that has relief of as much as 1,000 feet (300 meters) and fringes a mountain range or high-plateau escarpment.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head out. To form a flower head.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next

crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Low strength. The soil is not strong enough to support loads.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A natural elevation of the land surface, rising more than 1,000 feet above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Pebble. A rounded or angular fragment of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. A collection of pebbles is referred to as gravel.

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

Pedon. The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Layers of soil, or even bedrock, occurring in arctic or subarctic regions, in which a temperature below freezing has existed continuously for a long time.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Rangeland. Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous

wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the Earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slick spot. A small area of soil having a puddled, crusted, or smooth surface and an excess of exchangeable sodium. The soil generally is silty or clayey, is slippery when wet, and is low in productivity.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes in areas of the Piedmont Province are as follows:

Nearly level	0 to 3 percent
Gently sloping	3 to 8 percent
Strongly sloping	8 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 45 percent
Very steep	45 to 65 percent

Classes for simple slopes in areas of the Atlantic Coastal Plain Province are as follows:

Nearly level	0 to 2 percent
Gently sloping	2 to 5 percent
Strongly sloping	5 to 10 percent
Moderately steep	10 to 15 percent
Steep	15 to 25 percent
Very steep	25 to 45 percent

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on glacial outwash, or on a glaciolacustrine deposit.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^+ to Ca^{++} + Mg^{++}. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the Earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief over periods of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stone line. A concentration of coarse fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Fragments of rock and other soil material accumulated by gravity at the foot of cliffs or steep slopes.

Taxadjuncts. Soils that cannot be classified in a series recognized in the classification system. Such soils are named for a series they strongly resemble and are designated as taxadjuncts to that series because they differ in ways too small to be of consequence in interpreting their use and behavior. Soils are recognized as taxadjuncts only when one or more of their characteristics are slightly outside the range defined for the family of the series for which the soils are named.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tuff. A compacted deposit that is 50 percent or more volcanic ash and dust.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical and chemical changes produced in rocks or other deposits at or near the Earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.--Temperature and Precipitation

(Recorded in the period 1961-90 at Clarksville, Maryland.)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have-- Maximum temperature higher than--	2 years in 10 will have-- Minimum temperature lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snow-fall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January--	40.6	20.6	30.6	66	-8	26	3.10	1.47	4.50	6	7.7
February-	44.8	22.8	33.8	71	-3	50	2.94	1.36	4.30	5	7.3
March----	55.2	30.8	43.0	82	10	165	3.65	2.16	4.99	6	2.9
April----	65.6	38.8	52.2	88	20	371	3.62	2.16	4.93	7	0.2
May------	75.2	49.1	62.2	91	28	687	5.19	3.01	7.13	8	0.0
June-----	83.2	58.4	70.8	95	39	923	4.27	2.00	6.22	6	0.0
July-----	87.1	63.1	75.1	98	46	1,088	4.29	2.62	5.79	6	0.0
August---	85.6	61.7	73.7	97	42	1,044	4.05	2.05	5.79	6	0.0
September	79.6	54.2	66.9	95	34	807	3.84	1.41	5.87	4	0.0
October--	68.0	42.5	55.2	86	21	468	3.69	2.18	5.04	5	0.1
November-	56.5	34.1	45.3	79	14	205	3.67	1.93	5.20	6	1.0
December-	45.8	26.0	35.9	71	3	65	3.63	1.60	5.36	5	3.1
Yearly:											
Average-	65.6	41.8	53.7	---	---	---	---	---	---	---	---
Extreme-	---	---	---	99	-11	---	---	---	---	---	---
Total---	---	---	---	---	---	5,898	45.94	37.86	53.34	70	22.3

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 2.--Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Clarksville, Maryland.)

Probability	Temperature		
	24° F or lower	28° F or lower	32° F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	Apr. 17	May 4	May 13
2 years in 10 later than--	Apr. 13	Apr. 30	May 10
5 years in 10 later than--	Apr. 6	Apr. 21	May 3
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 16	Oct. 6	Sept. 29
2 years in 10 earlier than--	Oct. 22	Oct. 11	Oct. 3
5 years in 10 earlier than--	Nov. 3	Oct. 22	Oct. 12

Table 3.--Growing Season

(Recorded in the period 1961-90 at Clarksville, Maryland.)

Probability	Daily minimum temperature during growing season		
	Higher than 24° F	Higher than 28° F	Higher than 32° F
	Days	Days	Days
9 years in 10	187	160	145
8 years in 10	195	168	151
5 years in 10	211	183	162
2 years in 10	226	197	172
1 year in 10	234	205	178

Table 4.--Classification of the Soils

(An asterisk in the first column indicates that the soil is a taxadjunct to the series. See text for a description of those characteristics that are outside the range of the series.)

Soil name	Family or higher taxonomic class
Alloway	Fine, mixed, active, mesic Aquic Paleudults
Baile	Fine-loamy, mixed, semiactive, mesic Typic Endoaquults
Bannertown	Coarse-loamy, mixed, semiactive, mesic Typic Dystrudepts
*Beltsville	Fine-loamy, mixed, semiactive, mesic Fragiaquic Hapludults
Benevola	Fine, mixed, semiactive, mesic Mollic Hapludalfs
Blocktown	Loamy-skeletal, mixed, semiactive, mesic, shallow Typic Hapludults
Brinklow	Fine-loamy, mixed, semiactive, mesic Inceptic Hapludults
*Chillum	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Codorus	Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
Croom	Loamy-skeletal, mixed, semiactive, mesic Typic Hapludults
Downer	Coarse-loamy, siliceous, semiactive, mesic Typic Hapludults
Elioak	Fine, kaolinitic, mesic Typic Hapludults
Evesboro	Mesic, coated Typic Quartzipsamments
Fallsington	Fine-loamy, mixed, active, mesic Typic Endoaquults
Fort Mott	Loamy, siliceous, semiactive, mesic Arenic Hapludults
Gaila	Fine-loamy, mixed, active, mesic Inceptic Hapludults
Gladstone	Fine-loamy, mixed, active, mesic Typic Hapludults
Glenelg	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Glenville	Fine-loamy, mixed, active, mesic Aquic Fragiudults
Hambrook	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
*Hammonton	Coarse-loamy, siliceous, semiactive, mesic Oxyaquic Hapludults
Hatboro	Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
Issue	Coarse-loamy, mixed, active, acid, mesic Fluvaquentic Dystrudepts
Jackland	Fine, smectitic, mesic Aquic Hapludalfs
Legore	Fine-loamy, mixed, active, mesic Ultic Hapludalfs
Manor	Coarse-loamy, micaceous, mesic Typic Dystrudepts
Montalto	Fine, mixed, active, mesic Ultic Hapludalfs
Mount Lucas	Fine-loamy, mixed, superactive, mesic Aquic Hapludalfs
Occoquan	Fine-loamy, mixed, semiactive, mesic Inceptic Hapludults
Patapsco	Loamy, siliceous, semiactive, mesic Grossarenic Paleudults
Phalanx	Coarse-loamy, siliceous, semiactive, mesic Typic Hapludults
Relay	Fine-loamy, mixed, active, mesic Typic Hapludalfs
Russett	Fine-loamy, mixed, semiactive, mesic Aquic Hapludults
Sassafras	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Udorthents	Udorthents
Watchung	Fine, smectitic, mesic Typic Albaqualfs
Wheaton	Fine-loamy, mixed, semiactive, acid, mesic Typic Udorthents
Wiltshire	Fine-loamy, mixed, semiactive, mesic Oxyaquic Fragiudalfs
Woodstown	Fine-loamy, mixed, active, mesic Aquic Hapludults
*Zekiah	Fine-loamy, siliceous, active, acid, mesic Typic Fluvaquents

Table 5.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
AwB	Alloway silt loam, 2 to 5 percent slopes	58	*
BaA	Baile silt loam, 0 to 3 percent slopes	2,538	1.6
BeA	Benevola silt loam, 0 to 3 percent slopes	144	*
BeB	Benevola silt loam, 3 to 8 percent slopes	536	0.3
BeC	Benevola silt loam, 8 to 15 percent slopes	116	*
BrC	Brinklow channery loam, 8 to 15 percent slopes	321	0.2
BrD	Brinklow channery loam, 15 to 25 percent slopes	1,342	0.8
BtF	Brinklow-Blocktown channery loams, 25 to 65 percent slopes	595	0.4
CeB	Chillum loam, 2 to 5 percent slopes	457	0.3
CeC	Chillum loam, 5 to 10 percent slopes	479	0.3
ChB	Chillum-Russett loams, 2 to 5 percent slopes	399	0.2
ChC	Chillum-Russett loams, 5 to 10 percent slopes	380	0.2
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	5,055	3.1
Cp	Codorus and Hatboro soils, 0 to 2 percent slopes, frequently flooded	244	0.2
CrD	Croom and Evesboro soils, 10 to 15 percent slopes	439	0.3
DhB	Downer-Hammonton sandy loams, 2 to 5 percent slopes	106	*
DhC	Downer-Hammonton sandy loams, 5 to 10 percent slopes	127	*
DhD	Downer-Hammonton sandy loams, 10 to 15 percent slopes	6	*
DxC	Downer-Phalanx complex, 5 to 10 percent slopes	2	*
EaB	Elioak silt loam, 3 to 8 percent slopes	10	*
EbC	Evesboro loamy sand, 2 to 10 percent slopes	176	0.1
Fa	Fallsington sandy loam, 0 to 2 percent slopes	1,750	1.1
GaC	Gaila loam, 8 to 15 percent slopes	1,244	0.8
GaD	Gaila loam, 15 to 25 percent slopes	184	0.1
GbA	Gladstone loam, 0 to 3 percent slopes	573	0.4
GbB	Gladstone loam, 3 to 8 percent slopes	8,165	5.0
GbC	Gladstone loam, 8 to 15 percent slopes	4,930	3.0
GcB	Gladstone-Legore complex, 3 to 8 percent slopes	102	*
GcC	Gladstone-Legore complex, 8 to 15 percent slopes	190	0.1
GdC	Gladstone-Legore complex, 8 to 15 percent slopes, stony	126	*
GdD	Gladstone-Legore complex, 15 to 25 percent slopes, stony	245	0.2
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	3,244	2.0
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes	798	0.5
GgA	Glenelg loam, 0 to 3 percent slopes	3,271	2.0
GgB	Glenelg loam, 3 to 8 percent slopes	25,365	15.6
GgC	Glenelg loam, 8 to 15 percent slopes	10,454	6.4
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	6,974	4.3
GhC	Glenelg-Urban land complex, 8 to 15 percent slopes	969	0.6
GmA	Glenville silt loam, 0 to 3 percent slopes	898	0.6
GmB	Glenville silt loam, 3 to 8 percent slopes	7,033	4.3
GmC	Glenville silt loam, 8 to 15 percent slopes	1,103	0.7
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes	7,011	4.3
GoB	Glenville-Codorus silt loams, 0 to 8 percent slopes	1,086	0.7
GuB	Glenville-Urban land-Udorthents complex, 0 to 8 percent slopes	950	0.6
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes	4,167	2.6
JaB	Jackland silt loam, 3 to 8 percent slopes	211	0.1
LaB	Legore silt loam, 3 to 8 percent slopes	525	0.3
LaC	Legore silt loam, 8 to 15 percent slopes	707	0.4
LeB	Legore silt loam, 3 to 8 percent slopes, stony	123	*
LeC	Legore silt loam, 8 to 15 percent slopes, stony	629	0.4
LmB	Legore-Montalto silt loams, 3 to 8 percent slopes	860	0.5
LoB	Legore-Montalto-Urban land complex, 0 to 8 percent slopes	1,882	1.2
LoC	Legore-Montalto-Urban land complex, 8 to 15 percent slopes	400	0.2
LrD	Legore-Relay gravelly loams, 15 to 25 percent slopes, very stony	648	0.4
LrF	Legore-Relay gravelly loams, 25 to 65 percent slopes, very stony	756	0.5
MaB	Manor loam, 3 to 8 percent slopes	1,644	1.0
MaC	Manor loam, 8 to 15 percent slopes	8,849	5.5
MaD	Manor loam, 15 to 25 percent slopes	7,409	4.6
McD	Manor loam, 15 to 25 percent slopes, very rocky	1,879	1.2
MgD	Manor-Bannertown sandy loams, 15 to 25 percent slopes, rocky	777	0.5
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky	1,628	1.0
MkF	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky	2,319	1.4
MoB	Mount Lucas silt loam, 3 to 8 percent slopes, stony	152	*
MoC	Mount Lucas silt loam, 8 to 15 percent slopes, stony	110	*

Table 5.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
OcB	Occoquan loam, 3 to 8 percent slopes	883	0.5
OcC	Occoquan loam, 8 to 15 percent slopes	1,546	1.0
PfC	Patapsco-Fort Mott complex, 5 to 10 percent slopes	2	*
RsB	Russett fine sandy loam, 2 to 5 percent slopes	311	0.2
RsC	Russett fine sandy loam, 5 to 10 percent slopes	605	0.4
RsD	Russett fine sandy loam, 10 to 15 percent slopes	240	0.1
RtB	Russett-Alloway-Hambrook complex, 0 to 5 percent slopes	15	*
RtC	Russett-Alloway-Hambrook complex, 5 to 10 percent slopes	7	*
RtD	Russett-Alloway-Hambrook complex, 10 to 15 percent slopes	3	*
RuB	Russett and Beltsville soils, 2 to 5 percent slopes	1,200	0.7
RuC	Russett and Beltsville soils, 5 to 10 percent slopes	593	0.4
SaB	Sassafras loam, 2 to 5 percent slopes	424	0.3
SaC	Sassafras loam, 5 to 10 percent slopes	443	0.3
SfB	Sassafras gravelly sandy loam, 2 to 5 percent slopes	241	0.1
SrC	Sassafras and Croom soils, 5 to 10 percent slopes	704	0.4
SrD	Sassafras and Croom soils, 10 to 15 percent slopes	576	0.4
SrE	Sassafras and Croom soils, 15 to 25 percent slopes	256	0.2
UaF	Udorthents, Highway, 0 to 65 percent slopes	3,415	2.1
UbF	Udorthents, Refuse, 0 to 65 percent slopes	277	0.2
UcB	Urban land-Chillum-Beltsville complex, 0 to 5 percent slopes	2,463	1.5
UcD	Urban land-Chillum-Beltsville complex, 5 to 15 percent slopes	887	0.5
UdB	Udorthents, loamy, 0 to 5 percent slopes	13	*
UfA	Urban land-Fallsington complex, 0 to 2 percent slopes	349	0.2
UoE	Udorthents, 0 to 45 percent slopes, Gravel Pits	218	0.1
Ur	Urban land	1	*
UsB	Urban land-Sassafras-Beltsville complex, 0 to 5 percent slopes	844	0.5
UsD	Urban land-Sassafras-Beltsville complex, 5 to 15 percent slopes	316	0.2
UtD	Urban land-Udorthents complex, 0 to 15 percent slopes	4,455	2.7
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes	1,889	1.2
UuD	Urban land-Udorthents complex, 8 to 25 percent slopes	163	0.1
UwC	Urban land-Woodstown-Sassafras complex, 5 to 10 percent slopes	69	*
W	Water	1,376	0.8
WaA	Watchung silt loam, 0 to 3 percent slopes	97	*
WcB	Watchung silt loam, 3 to 8 percent slopes, stony	423	0.3
WgB	Wheaton-Glenelg complex, 0 to 8 percent slopes	178	0.1
WgD	Wheaton-Glenelg complex, 8 to 25 percent slopes	74	*
WhA	Wiltshire silt loam, 0 to 3 percent slopes	170	0.1
WhB	Wiltshire silt loam, 3 to 8 percent slopes	296	0.2
WoA	Woodstown sandy loam, 0 to 2 percent slopes	2	*
WoB	Woodstown sandy loam, 2 to 5 percent slopes	178	0.1
ZbA	Zekiah and Issue soils, 0 to 2 percent slopes, frequently flooded	28	*
	Total	162,100	100.0

* Less than 0.05 percent. The combined extent of the soils assigned an asterisk in the "Percent" column is about 0.1 percent of the survey area.

Table 6.--Land Capability and Yields per Acre of Crops

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil.)

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
AwB:						
Alloway	2e	---	125	---	40	45
BaA:						
Baile	5w	---	---	---	---	---
BeA:						
Benevola	1	5.00	125	25	30	45
BeB:						
Benevola	2e	5.00	125	25	30	45
BeC:						
Benevola	3e	5.00	115	25	30	45
BrC:						
Brinklow	3e	3.00	110	20	35	40
BrD:						
Brinklow	4e	3.00	100	15	30	40
BtF:						
Brinklow	7e	---	---	---	---	---
Blocktown	7e	---	---	---	---	---
CeB:						
Chillum	2e	---	130	26	40	40
CeC:						
Chillum	3e	---	115	24	35	35
ChB:						
Chillum	2e	---	130	26	40	40
Russett	2e	---	110	24	35	35
ChC:						
Chillum	3e	---	115	24	35	35
Russett	3e	---	95	24	30	30
Co:						
Codorus	2w	4.50	130	20	40	45
Hatboro	5w	---	---	---	---	---
Cp:						
Codorus, frequently flooded	2w	3.50	130	---	40	45
Hatboro, frequently flooded	5w	---	---	---	---	---
CrD:						
Croom	4e	2.00	60	---	25	35
Evesboro	4s	2.00	70	---	20	30

Table 6.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
DhB:						
Downer------------------	2e	4.00	115	---	45	50
Hammonton---------------	2e	3.50	110	---	35	40
DhC:						
Downer------------------	3e	3.00	95	---	40	45
Hammonton---------------	3e	2.50	90	---	30	30
DhD:						
Downer------------------	4e	2.50	90	---	35	35
Hammonton---------------	4e	2.50	85	---	25	30
DxC:						
Downer------------------	3e	2.50	95	---	25	35
Phalanx-----------------	3e	---	95	---	25	35
EaB:						
Elioak------------------	2e	5.50	135	27	45	50
EbC:						
Evesboro----------------	3s	2.00	70	---	20	30
Fa:						
Fallsington, undrained--	5w	---	---	---	---	---
GaC:						
Gaila-------------------	3e	4.00	110	19	35	40
GaD:						
Gaila-------------------	4e	3.50	105	19	35	40
GbA:						
Gladstone---------------	1	4.50	130	26	40	45
GbB:						
Gladstone---------------	2e	4.50	130	26	40	45
GbC:						
Gladstone---------------	3e	4.00	120	24	35	40
GcB:						
Gladstone---------------	2e	4.50	130	26	40	45
Legore------------------	2e	3.50	125	19	40	40
GcC:						
Gladstone---------------	3e	4.00	120	24	35	40
Legore------------------	3e	3.00	115	19	35	35
GdC:						
Gladstone---------------	6s	---	---	---	---	---
Legore------------------	6s	---	---	---	---	---
GdD:						
Gladstone---------------	6s	---	---	---	---	---
Legore------------------	6s	---	---	---	---	---

Table 6.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
GfB:						
Gladstone	2e	4.50	130	26	40	45
Urban land	8s	---	---	---	---	---
GfC:						
Gladstone	3e	4.00	120	24	35	40
Urban land	8s	---	---	---	---	---
GgA:						
Glenelg	1	5.50	135	27	45	50
GgB:						
Glenelg	2e	5.50	135	27	45	50
GgC:						
Glenelg	3e	5.00	125	25	40	45
GhB:						
Glenelg	2e	5.50	135	27	45	50
Urban land	8s	---	---	---	---	---
GhC:						
Glenelg	3e	5.00	125	25	40	45
Urban land	8s	---	---	---	---	---
GmA:						
Glenville	2w	3.50	100	20	30	35
GmB:						
Glenville	2e	3.50	110	20	35	40
GmC:						
Glenville	3e	3.00	90	20	30	35
GnB:						
Glenville	2e	3.50	110	20	35	40
Baile	5w	---	---	---	---	---
GoB:						
Glenville	2e	3.50	110	20	35	40
Codorus	2w	4.50	130	20	40	45
GuB:						
Glenville	2e	3.50	110	20	35	40
Urban land	8s	---	---	---	---	---
Udorthents	6s	---	---	---	---	---
Ha:						
Hatboro	5w	---	---	---	---	---
Codorus	2w	4.50	130	20	40	45
JaB:						
Jackland	2e	---	80	13	---	40

Table 6.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
LaB:						
Legore	2e	3.50	125	19	40	40
LaC:						
Legore	3e	3.00	115	19	40	35
LeB:						
Legore	6s	---	---	---	---	---
LeC:						
Legore	6s	---	---	---	---	---
LmB:						
Legore	2e	3.50	125	19	40	40
Montalto	2e	5.50	135	27	45	50
LoB:						
Legore	2e	3.50	125	19	40	40
Montalto	2e	5.50	135	27	45	50
Urban land	8s	---	---	---	---	---
LoC:						
Legore	3e	3.00	115	19	35	40
Montalto	3e	5.00	130	27	40	50
Urban land	8s	---	---	---	---	---
LrD:						
Legore	6s	---	---	---	---	---
Relay	6s	---	---	---	---	---
LrF:						
Legore	7s	---	---	---	---	---
Relay	7s	---	---	---	---	---
MaB:						
Manor	2e	4.00	115	23	35	40
MaC:						
Manor	3e	3.50	105	21	30	35
MaD:						
Manor	4s	2.50	95	19	25	30
McD:						
Manor	6s	---	---	---	---	---
MgD:						
Manor	6s	---	---	---	---	---
Bannertown	6s	---	---	---	---	---
MgF:						
Manor	7s	---	---	---	---	---
Bannertown	7s	---	---	---	---	---

Table 6.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
MkF:						
Manor	7s	---	---	---	---	---
Brinklow	7s	---	---	---	---	---
MoB:						
Mount Lucas	6s	---	---	---	---	---
MoC:						
Mount Lucas	6s	---	---	---	---	---
OcB:						
Occoquan	2e	3.00	115	12	30	35
OcC:						
Occoquan	3e	2.50	105	10	25	30
PfC:						
Patapsco	3e	---	40	---	15	25
Fort Mott	3e	2.50	75	---	20	25
RsB:						
Russett	2e	3.00	110	24	35	35
RsC:						
Russett	3e	2.50	110	24	30	30
RsD:						
Russett	4e	2.50	85	24	25	30
RtB:						
Russett	2e	3.00	110	24	35	35
Alloway	2e	3.00	135	---	40	45
Hambrook	2e	3.00	115	---	35	40
RtC:						
Russett	3e	2.50	95	24	30	30
Alloway	3e	3.00	120	---	35	40
Hambrook	3e	---	115	---	35	40
RtD:						
Russett	4e	2.50	85	24	25	30
Alloway	4e	3.00	115	---	30	35
Hambrook	4e	2.50	110	---	30	35
RuB:						
Russett	2e	3.50	110	24	35	35
Beltsville	2e	2.00	95	19	35	35
RuC:						
Russett	3e	2.50	80	24	30	40
Beltsville	3e	2.00	80	18	30	40
SaB:						
Sassafras	2e	4.50	130	---	45	50

Table 6.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
SaC:						
Sassafras---------------	3e	4.00	125	20	35	40
SfB:						
Sassafras---------------	2e	4.50	130	---	45	50
SrC:						
Sassafras---------------	3e	4.00	125	20	35	40
Croom-------------------	3e	3.00	65	13	30	30
SrD:						
Sassafras---------------	4e	2.50	100	20	35	40
Croom-------------------	4e	2.00	55	---	25	25
SrE:						
Sassafras---------------	6e	---	---	---	---	---
Croom-------------------	6e	---	---	---	---	---
UaF:						
Udorthents--------------	8s	---	---	---	---	---
UbF:						
Udorthents--------------	8s	---	---	---	---	---
UcB:						
Urban land--------------	8s	---	---	---	---	---
Chillum-----------------	2e	3.50	130	26	40	40
Beltsville--------------	2e	2.00	95	19	35	35
UcD:						
Urban land--------------	8s	---	---	---	---	---
Chillum-----------------	4e	2.50	95	24	25	30
Beltsville--------------	4e	2.00	80	18	---	30
UdB:						
Udorthents--------------	6s	---	---	---	---	---
UfA:						
Urban land--------------	8s	---	---	---	---	---
Fallsington, undrained--	4w	---	---	---	---	---
UoE:						
Udorthents--------------	8s	---	---	---	---	---
Ur:						
Urban land--------------	8s	---	---	---	---	---
UsB:						
Urban land--------------	8s	---	---	---	---	---
Sassafras---------------	2e	4.50	130	---	45	50
Beltsville--------------	2e	2.00	95	19	35	35

Table 6.--Land Capability and Yields per Acre of Crops--Continued

Map symbol and soil name	Land capability	Alfalfa hay	Corn	Corn silage	Soybeans	Wheat
		Tons	Bu	Tons	Bu	Bu
UsD:						
Urban land	8s	---	---	---	---	---
Sassafras	4e	2.50	100	20	35	40
Beltsville	4e	2.00	80	18	25	30
UtD:						
Urban land	8s	---	---	---	---	---
Udorthents	6s	---	---	---	---	---
UuB:						
Urban land	8s	---	---	---	---	---
Udorthents	6s	---	---	---	---	---
UuD:						
Urban land	8s	---	---	---	---	---
Udorthents	6s	---	---	---	---	---
UwC:						
Urban land	8s	---	---	---	---	---
Woodstown	3e	---	120	24	35	40
Sassafras	3e	4.00	125	20	35	40
WaA:						
Watchung	5w	---	---	---	---	---
WcB:						
Watchung	6s	---	---	---	---	---
WgB:						
Wheaton	2e	4.00	120	20	35	40
Glenelg	2e	5.50	135	27	45	50
WgD:						
Wheaton	4e	3.50	110	19	30	35
Glenelg	4e	5.00	115	25	35	45
WhA:						
Wiltshire	2w	3.00	100	20	40	40
WhB:						
Wiltshire	2e	3.50	100	20	40	40
WoA:						
Woodstown	2w	2.50	125	---	35	40
WoB:						
Woodstown	2e	3.00	135	26	40	45
ZbA:						
Zekiah	5w	---	---	---	---	---
Issue	5w	---	---	---	---	---

Table 7.--Prime Farmland and Other Important Farmland

(Only the soils considered prime or important farmland are listed. Urban or built-up areas of the soils listed are not considered prime or important farmland.)

Map symbol	Map unit name
Prime farmland:	
AwB	Alloway silt loam, 2 to 5 percent slopes
BeA	Benevola silt loam, 0 to 3 percent slopes
BeB	Benevola silt loam, 3 to 8 percent slopes
CeB	Chillum loam, 2 to 5 percent slopes
ChB	Chillum-Russett loams, 2 to 5 percent slopes
EaB	Elioak silt loam, 3 to 8 percent slopes
GbA	Gladstone loam, 0 to 3 percent slopes
GbB	Gladstone loam, 3 to 8 percent slopes
GcB	Gladstone-Legore complex, 3 to 8 percent slopes
GgA	Glenelg loam, 0 to 3 percent slopes
GgB	Glenelg loam, 3 to 8 percent slopes
GmA	Glenville silt loam, 0 to 3 percent slopes
GmB	Glenville silt loam, 3 to 8 percent slopes
LaB	Legore silt loam, 3 to 8 percent slopes
LmB	Legore-Montalto silt loams, 3 to 8 percent slopes
MaB	Manor loam, 3 to 8 percent slopes
OcB	Occoquan loam, 3 to 8 percent slopes
RsB	Russett fine sandy loam, 2 to 5 percent slopes
RuB	Russett and Beltsville soils, 2 to 5 percent slopes
SaB	Sassafras loam, 2 to 5 percent slopes
SfB	Sassafras gravelly sandy loam, 2 to 5 percent slopes
WhA	Wiltshire silt loam, 0 to 3 percent slopes
WhB	Wiltshire silt loam, 3 to 8 percent slopes
WoA	Woodstown sandy loam, 0 to 2 percent slopes
WoB	Woodstown sandy loam, 2 to 5 percent slopes
Farmland of statewide importance:	
BeC	Benevola silt loam, 8 to 15 percent slopes
BrC	Brinklow channery loam, 8 to 15 percent slopes
CeC	Chillum loam, 5 to 10 percent slopes
ChC	Chillum-Russett loams, 5 to 10 percent slopes
DxC	Downer-Phalanx complex, 5 to 10 percent slopes
Fa	Fallsington sandy loam, 0 to 2 percent slopes
GaC	Gaila loam, 8 to 15 percent slopes
GbC	Gladstone loam, 8 to 15 percent slopes
GcC	Gladstone-Legore complex, 8 to 15 percent slopes
GgC	Glenelg loam, 8 to 15 percent slopes
GmC	Glenville silt loam, 8 to 15 percent slopes
GoB	Glenville-Codorus silt loams, 0 to 8 percent slopes
JaB	Jackland silt loam, 3 to 8 percent slopes
LaC	Legore silt loam, 8 to 15 percent slopes
MaC	Manor loam, 8 to 15 percent slopes
OcC	Occoquan loam, 8 to 15 percent slopes
RsC	Russett fine sandy loam, 5 to 10 percent slopes
RuC	Russett and Beltsville soils, 5 to 10 percent slopes
SaC	Sassafras loam, 5 to 10 percent slopes
SrC	Sassafras and Croom soils, 5 to 10 percent slopes
WgB	Wheaton-Glenelg complex, 0 to 8 percent slopes

Table 8a.--Agricultural Waste Management (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:					
Alloway	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.86	Depth to saturated zone	0.99
BaA:					
Baile	85	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
		Runoff	0.40	Too acid	0.96
		Too acid	0.37		
BeA:					
Benevola	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.41	Slow water movement	0.31
BeB:					
Benevola	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.41	Slow water movement	0.31
BeC:					
Benevola	85	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Slow water movement	0.41	Slow water movement	0.31
BrC:					
Brinklow	85	Somewhat limited		Very limited	
		Slope	0.63	Low adsorption	1.00
		Slow water movement	0.50	Too acid	0.96
		Depth to bedrock	0.46	Slope	0.63
		Too acid	0.37	Depth to bedrock	0.46
		Droughty	0.35	Slow water movement	0.37
BrD:					
Brinklow	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Slow water movement	0.50	Slope	1.00
		Depth to bedrock	0.46	Too acid	0.96
		Too acid	0.37	Depth to bedrock	0.46
		Droughty	0.35	Slow water movement	0.37

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
BtF:					
Brinklow------------	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Slow water movement	0.50	Slope	1.00
		Depth to bedrock	0.46	Too acid	0.96
		Too acid	0.37	Depth to bedrock	0.46
		Droughty	0.35	Slow water movement	0.37
Blocktown-----------	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
		Droughty	0.92	Depth to bedrock	1.00
		Slow water movement	0.50	Too acid	0.96
		Too acid	0.37	Droughty	0.92
CeB:					
Chillum-------------	85	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
CeC:					
Chillum-------------	85	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
		Slope	0.01	Slope	0.01
ChB:					
Chillum-------------	55	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
Russett-------------	35	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81		
ChC:					
Chillum-------------	55	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
		Slope	0.01	Slope	0.01
Russett-------------	35	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81	Slope	0.01
		Slope	0.01		
Co:					
Codorus-------------	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.32	Too acid	0.91

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Co:					
Hatboro	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Runoff	0.40	Too acid	0.31
		Too acid	0.08	Filtering capacity	0.01
Cp:					
Codorus, frequently flooded	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.86	Depth to saturated zone	0.99
Hatboro, frequently flooded	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Runoff	0.40	Too acid	0.21
		Too acid	0.05		
CrD:					
Croom	55	Somewhat limited		Very limited	
		Slope	0.84	Too acid	1.00
		Too acid	0.82	Slope	0.84
		Droughty	0.58	Droughty	0.58
		Slow water movement	0.30	Slow water movement	0.22
Evesboro	30	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Slope	0.84	Too acid	0.91
		Leaching	0.45	Slope	0.84
		Too acid	0.32	Droughty	0.23
		Droughty	0.23		
DhB:					
Downer	50	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.05	Too acid	0.21
Hammonton	30	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.02	Too acid	0.07
DhC:					
Downer	50	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.05	Too acid	0.21
		Slope	0.01	Slope	0.01

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
DhC:					
Hammonton	30	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.02	Too acid	0.07
		Slope	0.01	Slope	0.01
DhD:					
Downer	50	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Slope	0.84	Slope	0.84
		Too acid	0.05	Too acid	0.21
Hammonton	35	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Slope	0.84	Slope	0.84
		Too acid	0.02	Too acid	0.07
DxC:					
Downer	50	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.05	Too acid	0.21
		Slope	0.01	Slope	0.01
Phalanx	35	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Too acid	0.86	Too acid	1.00
		Slope	0.01	Droughty	1.00
				Slope	0.01
EaB:					
Elioak	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Low adsorption	1.00	Low adsorption	0.38
		Dense layer	1.00	Too acid	0.21
		Too acid	0.05		
EbC:					
Evesboro	85	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Leaching	0.45	Too acid	0.91
		Too acid	0.32	Droughty	0.23
		Droughty	0.23	Slope	0.01
		Slope	0.01		
Fa:					
Fallsington, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Runoff	0.40	Too acid	0.96
		Too acid	0.37		

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GaC:					
Gaila	85	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.11	Too acid	0.42
GaD:					
Gaila	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
GbA:					
Gladstone	85	Somewhat limited		Somewhat limited	
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
GbB:					
Gladstone	85	Somewhat limited		Somewhat limited	
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
GbC:					
Gladstone	85	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
GcB:					
Gladstone	55	Somewhat limited		Somewhat limited	
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
Legore	30	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
GcC:					
Gladstone	55	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
Legore	30	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Slope	0.63	Too acid	0.99
		Too acid	0.50	Slope	0.63

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GdC:					
Gladstone-----------	55	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
		Large stones content	0.01		
Legore--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Slope	0.63	Too acid	0.99
		Too acid	0.50	Slope	0.63
		Large stones content	0.01		
GdD:					
Gladstone-----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
		Large stones content	0.01		
Legore--------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Large stones content	0.01		
GfB:					
Gladstone-----------	50	Somewhat limited		Somewhat limited	
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
Urban land----------	40	Not rated		Not rated	
GfC:					
Gladstone-----------	45	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.03	Too acid	0.14
		Filtering capacity	0.01	Filtering capacity	0.01
Urban land----------	40	Not rated		Not rated	
GgA:					
Glenelg-------------	85	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
GgB:					
Glenelg-------------	85	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
GgC:					
Glenelg	85	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.05	Too acid	0.21
GhB:					
Glenelg	45	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
Urban land	35	Not rated		Not rated	
GhC:					
Glenelg	45	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.05	Too acid	0.21
Urban land	30	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Runoff	0.40	Too acid	0.42
		Too acid	0.11		
GmA:					
Glenville	85	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Depth to cemented pan	0.46	Depth to cemented pan	0.46
		Droughty	0.45	Droughty	0.45
		Too acid	0.05	Too acid	0.21
GmB:					
Glenville	85	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Depth to cemented pan	0.46	Depth to cemented pan	0.46
		Droughty	0.45	Droughty	0.45
		Too acid	0.05	Too acid	0.21
GmC:					
Glenville	85	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Slope	0.63	Slope	0.63
		Depth to cemented pan	0.46	Depth to cemented pan	0.46
		Droughty	0.45	Droughty	0.45
		Too acid	0.05	Too acid	0.21
GnB:					
Glenville	50	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Depth to cemented pan	0.46	Depth to cemented pan	0.46
		Droughty	0.45	Droughty	0.45
		Too acid	0.05	Too acid	0.21

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
GnB:					
Baile	35	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
		Runoff	0.40	Too acid	0.96
		Too acid	0.37		
GoB:					
Glenville	60	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Depth to cemented pan	0.46	Depth to cemented pan	0.46
		Droughty	0.45	Droughty	0.45
		Too acid	0.05	Too acid	0.21
Codorus	35	Very limited		Very limited	
		Depth to saturated zone	0.99	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	0.99
		Too acid	0.32	Too acid	0.91
GuB:					
Glenville	45	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
		Depth to cemented pan	0.46	Depth to cemented pan	0.46
		Droughty	0.45	Droughty	0.45
		Too acid	0.05	Too acid	0.21
Urban land	35	Not rated		Not rated	
Udorthents	20	Very limited		Very limited	
		Slow water movement	1.00	Low adsorption	1.00
		Too acid	0.11	Slow water movement	1.00
				Too acid	0.42
Ha:					
Hatboro	60	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Flooding	1.00
		Flooding	0.60	Slow water movement	1.00
		Runoff	0.40	Too acid	0.31
Codorus	35	Very limited		Very limited	
		Depth to saturated zone	0.99	Flooding	1.00
		Flooding	0.60	Depth to saturated zone	0.99
		Too acid	0.32	Too acid	0.91

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
JaB:					
Jackland	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff	0.40	Too acid	0.42
		Droughty	0.28	Droughty	0.28
		Too acid	0.11		
LaB:					
Legore	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
LaC:					
Legore	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Slope	0.37	Slope	0.37
LeB:					
Legore	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Large stones content	0.01		
LeC:					
Legore	85	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Slope	0.63	Too acid	0.99
		Too acid	0.50	Slope	0.63
		Large stones content	0.01		
LmB:					
Legore	55	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
Montalto	30	Very limited		Somewhat limited	
		Dense layer	1.00	Too acid	0.07
		Too acid	0.02		

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
LoB:					
Legore	40	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
Montalto	35	Very limited		Somewhat limited	
		Dense layer	1.00	Too acid	0.07
		Too acid	0.02		
Urban land	20	Not rated		Not rated	
LoC:					
Legore	40	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Slope	0.63	Too acid	0.99
		Too acid	0.50	Slope	0.63
Montalto	30	Very limited		Somewhat limited	
		Dense layer	1.00	Slope	0.63
		Slope	0.63	Too acid	0.07
		Too acid	0.02		
Urban land	20	Not rated		Not rated	
LrD:					
Legore	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Large stones content	0.76	Too acid	0.99
		Too acid	0.50		
Relay	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Large stones content	0.76	Too acid	0.42
		Too acid	0.11		
LrF:					
Legore	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Large stones content	0.76	Too acid	0.99
		Too acid	0.50		

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
LrF:					
Relay	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00
		Large stones content	0.76	Too acid	0.42
		Too acid	0.11		
MaB:					
Manor	85	Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42
MaC:					
Manor	85	Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63
		Too acid	0.11	Too acid	0.42
MaD:					
Manor	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
McD:					
Manor	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.42
		Too acid	0.11		
MgD:					
Manor	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.42
		Too acid	0.11		
Bannertown	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.96	Slope	1.00
		Large stones content	0.50	Droughty	0.96
				Too acid	0.77
		Depth to bedrock	0.46	Depth to bedrock	0.46
		Too acid	0.22		
MgF:					
Manor	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.42
		Too acid	0.11		
Bannertown	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.96	Slope	1.00
		Depth to bedrock	0.46	Droughty	0.96
		Too acid	0.22	Too acid	0.77
				Depth to bedrock	0.46

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
MkF:					
Manor	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.42
		Too acid	0.11		
Brinklow	30	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Slow water movement	0.50	Slope	1.00
		Depth to bedrock	0.46	Too acid	0.96
		Too acid	0.37	Depth to bedrock	0.46
		Droughty	0.35	Slow water movement	0.37
MoB:					
Mount Lucas	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.74	Slow water movement	0.60
		Too acid	0.11	Too acid	0.42
		Large stones content	0.01		
MoC:					
Mount Lucas	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.74	Slope	0.63
		Slope	0.63	Slow water movement	0.60
		Too acid	0.11	Too acid	0.42
		Large stones content	0.01		
OcB:					
Occoquan	85	Somewhat limited		Very limited	
		Too acid	0.11	Low adsorption	1.00
				Too acid	0.42
OcC:					
Occoquan	85	Somewhat limited		Very limited	
		Slope	0.63	Low adsorption	1.00
		Too acid	0.11	Slope	0.63
				Too acid	0.42
PfC:					
Patapsco	50	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Too acid	0.50	Too acid	0.99
		Leaching	0.45	Droughty	0.03
		Droughty	0.03	Depth to saturated zone	0.02
		Depth to saturated zone	0.02	Slope	0.01
Fort Mott	40	Very limited		Very limited	
		Filtering capacity	0.99	Filtering capacity	0.99
		Leaching	0.45	Too acid	0.14
		Too acid	0.03	Slope	0.01
		Slope	0.01		

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
RsB:					
Russett	85	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81		
RsC:					
Russett	85	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81	Slope	0.01
		Slope	0.01		
RsD:					
Russett	85	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slope	0.84
		Slope	0.84	Slow water movement	0.68
		Slow water movement	0.81		
RtB:					
Russett	50	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81		
Alloway	30	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.86	Depth to saturated zone	0.99
Hambrook	20	Somewhat limited		Somewhat limited	
		Slow water movement	0.89	Slow water movement	0.78
		Too acid	0.05	Too acid	0.21
		Depth to saturated zone	0.02	Depth to saturated zone	0.02
RtC:					
Russett	50	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81	Slope	0.01
		Slope	0.01		

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
RtC:					
Alloway	30	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.86	Depth to saturated zone	0.99
		Slope	0.01	Slope	0.01
Hambrook	20	Somewhat limited		Somewhat limited	
		Slow water movement	0.89	Slow water movement	0.78
		Too acid	0.05	Too acid	0.21
		Depth to saturated zone	0.02	Depth to saturated zone	0.02
		Slope	0.01	Slope	0.01
RtD:					
Russett	60	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slope	0.84
		Slope	0.84	Slow water movement	0.68
		Slow water movement	0.81		
Alloway	25	Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.86	Depth to saturated zone	0.99
		Slope	0.63	Slope	0.63
Hambrook	15	Somewhat limited		Somewhat limited	
		Slow water movement	0.89	Slow water movement	0.78
		Slope	0.63	Slope	0.63
		Too acid	0.05	Too acid	0.21
		Depth to saturated zone	0.02	Depth to saturated zone	0.02
RuB:					
Russett	50	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81		
Beltsville	35	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Too acid	0.89	Droughty	0.35
		Slow water movement	0.46	Slow water movement	0.34

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
RuC:					
Russett	55	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.96	Slow water movement	0.68
		Slow water movement	0.81	Slope	0.01
		Slope	0.01		
Beltsville	30	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Too acid	0.89	Droughty	0.35
		Slow water movement	0.46	Slow water movement	0.34
SaB:					
Sassafras	85	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
SaC:					
Sassafras	85	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
		Slope	0.01	Slope	0.01
SfB:					
Sassafras	85	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
SrC:					
Sassafras	55	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
		Slope	0.01	Slope	0.01
Croom	35	Somewhat limited		Very limited	
		Too acid	0.82	Too acid	1.00
		Droughty	0.58	Droughty	0.58
		Slow water movement	0.30	Slow water movement	0.22
		Slope	0.01	Slope	0.01
SrD:					
Sassafras	50	Somewhat limited		Somewhat limited	
		Slope	0.84	Slope	0.84
		Too acid	0.05	Too acid	0.21
Croom	35	Somewhat limited		Very limited	
		Slope	0.84	Too acid	1.00
		Too acid	0.82	Slope	0.84
		Droughty	0.58	Droughty	0.58
		Slow water movement	0.30	Slow water movement	0.22
SrE:					
Sassafras	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.05	Too acid	0.21

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
SrE:					
Croom----------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.82	Too acid	1.00
		Droughty	0.58	Droughty	0.58
		Slow water movement	0.30	Slow water movement	0.22
UaF:					
Udorthents----------	100	Not rated		Not rated	
UbF:					
Udorthents----------	100	Not rated		Not rated	
UcB:					
Urban land----------	45	Not rated		Not rated	
Chillum-------------	35	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
Beltsville----------	15	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Too acid	0.89	Droughty	0.35
		Slow water movement	0.46	Slow water movement	0.34
UcD:					
Urban land----------	45	Not rated		Not rated	
Chillum-------------	35	Somewhat limited		Very limited	
		Too acid	0.50	Too acid	0.99
		Slope	0.16	Slope	0.16
Beltsville----------	15	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Too acid	0.89	Droughty	0.35
		Slow water movement	0.46	Slow water movement	0.34
UdB:					
Udorthents----------	90	Somewhat limited		Very limited	
		Slow water movement	0.81	Too acid	1.00
		Too acid	0.62	Slow water movement	0.68
UfA:					
Urban land----------	50	Not rated		Not rated	

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
UfA:					
Fallsington, undrained	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Runoff	0.40	Too acid	0.96
		Too acid	0.37		
UoE:					
Udorthents	100	Not rated		Not rated	
Ur:					
Urban land	85	Not rated		Not rated	
UsB:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
Beltsville	15	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Too acid	0.89	Droughty	0.35
		Slow water movement	0.46	Slow water movement	0.34
UsD:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Somewhat limited		Somewhat limited	
		Slope	0.16	Too acid	0.21
		Too acid	0.05	Slope	0.16
Beltsville	15	Very limited		Very limited	
		Dense layer	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Too acid	0.89	Droughty	0.35
		Slow water movement	0.46	Slow water movement	0.34
UtD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Somewhat limited		Very limited	
		Slow water movement	0.81	Too acid	1.00
		Too acid	0.62	Slow water movement	0.68
		Slope	0.01	Slope	0.01
UuB:					
Urban land	60	Not rated		Not rated	

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
UuB:					
Udorthents----------	40	Very limited		Very limited	
		Slow water movement	1.00	Low adsorption	1.00
		Too acid	0.11	Slow water movement	1.00
		Low adsorption	0.01	Too acid	0.42
UuD:					
Urban land----------	60	Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited	
		Slow water movement	1.00	Low adsorption	1.00
		Slope	1.00	Slow water movement	1.00
		Too acid	0.11	Slope	1.00
		Low adsorption	0.01	Too acid	0.42
UwC:					
Urban land----------	50	Not rated		Not rated	
Woodstown-----------	25	Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.14	Too acid	0.55
		Slope	0.01	Slope	0.01
Sassafras-----------	20	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21
		Slope	0.01	Slope	0.01
WaA:					
Watchung------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.81	Slow water movement	0.68
		Runoff	0.40	Too acid	0.42
		Too acid	0.11		
WcB:					
Watchung------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.81	Slow water movement	0.68
		Large stones content	0.53	Too acid	0.42
		Runoff	0.40		
		Too acid	0.11		
WgB:					
Wheaton-------------	60	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Too acid	0.91
		Too acid	0.32	Low adsorption	0.18
Glenelg-------------	40	Somewhat limited		Somewhat limited	
		Too acid	0.05	Too acid	0.21

Table 8a.--Agricultural Waste Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
WgD:					
Wheaton	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.48	Too acid	0.91
		Too acid	0.32	Low adsorption	0.18
Glenelg	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.05	Too acid	0.21
WhA:					
Wiltshire	85	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	0.95
		Depth to cemented pan	0.54	Depth to cemented pan	0.54
		Droughty	0.47	Droughty	0.47
WhB:					
Wiltshire	85	Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.95	Depth to saturated zone	0.95
		Depth to cemented pan	0.54	Depth to cemented pan	0.54
		Droughty	0.47	Droughty	0.47
WoA:					
Woodstown	85	Very limited		Very limited	
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.56	Depth to saturated zone	0.99
WoB:					
Woodstown	85	Very limited		Very limited	
		Depth to saturated zone	0.99	Too acid	1.00
		Too acid	0.56	Depth to saturated zone	0.99
ZbA:					
Zekiah	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Too acid	0.62	Too acid	1.00
		Runoff	0.40		
Issue	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Too acid	0.78	Too acid	1.00

Table 8b.--Agricultural Waste Management (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:					
Alloway	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too steep for surface application	0.08		
BaA:					
Baile	85	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too acid	0.96
		Too acid	0.96	Seepage	0.62
BeA:					
Benevola	85	Somewhat limited		Very limited	
		Slow water movement	0.31	Seepage	1.00
BeB:					
Benevola	85	Somewhat limited		Very limited	
		Too steep for surface application	0.32	Seepage	1.00
		Slow water movement	0.31		
BeC:					
Benevola	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Slow water movement	0.31		
BrC:					
Brinklow	85	Very limited		Very limited	
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too steep for surface application	1.00
		Too steep for sprinkler application	0.78	Too acid	0.96
		Depth to bedrock	0.46	Seepage	0.62
		Slow water movement	0.37		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Disposal of wastewater by irrigation: Value	Overland flow of wastewater: Rating class and limiting features	Overland flow of wastewater: Value
BrD:					
Brinklow	85	Very limited		Very limited	
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Too acid	0.96
		Depth to bedrock	0.46	Seepage	0.62
		Slow water movement	0.37		
BtF:					
Brinklow	50	Very limited		Very limited	
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Too acid	0.96
		Depth to bedrock	0.46	Seepage	0.62
		Slow water movement	0.37		
Blocktown	40	Very limited		Very limited	
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too acid	0.96
		Too acid	0.96	Seepage	0.62
		Droughty	0.92		
CeB:					
Chillum	85	Very limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.99
CeC:					
Chillum	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.10	Too steep for surface application	0.22
ChB:					
Chillum	55	Very limited		Very limited	
		Too acid	0.99	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.99

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
ChB:					
Russett-------------	35	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Slow water movement	0.68	Depth to saturated zone	0.99
		Too steep for surface application	0.08		
ChC:					
Chillum-------------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.10	Too steep for surface application	0.22
Russett-------------	35	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Slow water movement	0.68	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		
Co:					
Codorus-------------	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Seepage	1.00
		Too acid	0.91	Depth to saturated zone	0.99
				Too acid	0.91
Hatboro-------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Too acid	0.31	Too acid	0.31
		Filtering capacity	0.01		
Cp:					
Codorus, frequently flooded------------	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
				Depth to saturated zone	0.99

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
Cp:					
Hatboro, frequently flooded	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Seepage	1.00
		Too acid	0.21	Depth to saturated zone	1.00
				Too acid	0.21
CrD:					
Croom	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90	Too acid	1.00
		Droughty	0.58		
		Slow water movement	0.22		
Evesboro	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
		Too steep for sprinkler application	0.90		
		Droughty	0.23		
DhB:					
Downer	50	Very limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Too acid	0.21	Too acid	0.21
		Too steep for surface application	0.08		
Hammonton	30	Very limited		Very limited	
		Filtering capacity	0.99	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too steep for surface application	0.08	Too acid	0.07
		Too acid	0.07		
DhC:					
Downer	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too steep for surface application	0.22
		Too acid	0.21	Too acid	0.21
		Too steep for sprinkler application	0.10		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
DhC:					
Hammonton	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Depth to saturated zone	0.99
		Depth to saturated zone	0.99	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10	Too acid	0.07
		Too acid	0.07		
DhD:					
Downer	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90	Too acid	0.21
		Too acid	0.21		
Hammonton	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too steep for surface application	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too steep for sprinkler application	0.90	Too acid	0.07
		Too acid	0.07		
DxC:					
Downer	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too steep for surface application	0.22
		Too acid	0.21	Too acid	0.21
		Too steep for sprinkler application	0.10		
Phalanx	35	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Droughty	1.00	Too acid	1.00
		Too steep for surface application	1.00	Stone content	0.97
		Too steep for sprinkler application	0.10	Too steep for surface application	0.22

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
EaB:					
Elioak	85	Very limited		Very limited	
		Low adsorption	1.00	Low adsorption	1.00
		Slow water movement	1.00	Seepage	1.00
		Too steep for surface application	0.68	Too acid	0.21
		Too acid	0.21		
EbC:					
Evesboro	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.91
		Too acid	0.91	Too steep for surface application	0.22
		Droughty	0.23		
		Too steep for sprinkler application	0.10		
Fa:					
Fallsington, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Ponding	1.00
		Too acid	0.96	Too acid	0.96
GaC:					
Gaila	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
GaD:					
Gaila	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.42	Too acid	0.42
GbA:					
Gladstone	85	Somewhat limited		Very limited	
		Too acid	0.14	Seepage	1.00
		Filtering capacity	0.01	Too acid	0.14

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
GbB:					
Gladstone----------	85	Somewhat limited		Very limited	
		Too steep for surface application	0.32	Seepage	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
GbC:					
Gladstone----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
GcB:					
Gladstone----------	55	Somewhat limited		Very limited	
		Too steep for surface application	0.68	Seepage	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
Legore-------------	30	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for surface application	0.68		
GcC:					
Gladstone----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
Legore-------------	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for sprinkler application	0.78		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
GdC:					
Gladstone	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
Legore	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for sprinkler application	0.78		
GdD:					
Gladstone	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
Legore	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	0.99
		Filtering capacity	0.99		
		Too acid	0.99		
GfB:					
Gladstone	50	Somewhat limited		Very limited	
		Too acid	0.14	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.14
		Filtering capacity	0.01		
Urban land	40	Not rated		Not rated	

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
GfC:					
Gladstone-----------	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.14	Too acid	0.14
		Filtering capacity	0.01		
Urban land----------	40	Not rated		Not rated	
GgA:					
Glenelg-------------	85	Somewhat limited		Very limited	
		Too acid	0.21	Seepage	1.00
				Too acid	0.21
GgB:					
Glenelg-------------	85	Somewhat limited		Very limited	
		Too steep for surface application	0.68	Seepage	1.00
		Too acid	0.21	Too acid	0.21
GgC:					
Glenelg-------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.21	Too acid	0.21
GhB:					
Glenelg-------------	45	Somewhat limited		Very limited	
		Too acid	0.21	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.21
Urban land----------	35	Not rated		Not rated	
GhC:					
Glenelg-------------	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.21	Too acid	0.21
Urban land----------	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GmA:					
Glenville	85	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00
		Depth to cemented pan	0.46	Seepage	1.00
		Droughty	0.45	Depth to saturated zone	0.86
		Too acid	0.21	Too acid	0.21
GmB:					
Glenville	85	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00
		Too steep for surface application	0.68	Seepage	1.00
		Depth to cemented pan	0.46	Depth to saturated zone	0.86
		Droughty	0.45	Too acid	0.21
		Too acid	0.21		
GmC:					
Glenville	85	Very limited		Very limited	
		Too steep for surface application	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.86	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Depth to cemented pan	0.46	Depth to saturated zone	0.86
		Droughty	0.45	Too acid	0.21
GnB:					
Glenville	50	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00
		Depth to cemented pan	0.46	Seepage	1.00
		Droughty	0.45	Depth to saturated zone	0.86
		Too acid	0.21	Too acid	0.21
		Too steep for surface application	0.08		
Baile	35	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too acid	0.96
		Too acid	0.96	Seepage	0.62
		Too steep for surface application	0.08		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
GoB:					
Glenville-----------	60	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00
		Depth to cemented pan	0.46	Seepage	1.00
		Droughty	0.45	Depth to saturated zone	0.86
		Too acid	0.21	Too acid	0.21
		Too steep for surface application	0.08		
Codorus-------------	35	Very limited		Very limited	
		Depth to saturated zone	0.99	Flooding	1.00
		Too acid	0.91	Seepage	1.00
		Flooding	0.60	Depth to saturated zone	0.99
				Too acid	0.91
GuB:					
Glenville-----------	45	Somewhat limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00
		Depth to cemented pan	0.46	Seepage	1.00
		Droughty	0.45	Depth to saturated zone	0.86
		Too acid	0.21	Too acid	0.21
		Too steep for surface application	0.08		
Urban land----------	35	Not rated		Not rated	
Udorthents----------	20	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to bedrock	0.99
		Too acid	0.42	Too acid	0.42
		Too steep for surface application	0.08	Seepage	0.31
Ha:					
Hatboro-------------	60	Very limited		Very limited	
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Ponding	1.00
		Flooding	0.60	Depth to saturated zone	1.00
		Too acid	0.31	Too acid	0.31
Codorus-------------	35	Very limited		Very limited	
		Depth to saturated zone	0.99	Flooding	1.00
		Too acid	0.91	Seepage	1.00
		Flooding	0.60	Depth to saturated zone	0.99
				Too acid	0.91

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
JaB:					
Jackland------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Too steep for surface application	0.68	Too acid	0.42
		Too acid	0.42		
		Droughty	0.28		
LaB:					
Legore--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for surface application	0.68		
LaC:					
Legore--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	1.00	Too acid	0.99
		Filtering capacity	0.99	Too steep for surface application	0.94
		Too acid	0.99		
		Too steep for sprinkler application	0.60		
LeB:					
Legore--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for surface application	0.68		
LeC:					
Legore--------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for sprinkler application	0.78		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
LmB:					
Legore	55	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for surface application	0.68		
Montalto	30	Somewhat limited		Very limited	
		Too steep for surface application	0.68	Seepage	1.00
		Too acid	0.07	Too acid	0.07
LoB:					
Legore	40	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for surface application	0.68		
Montalto	35	Somewhat limited		Very limited	
		Too steep for surface application	0.08	Seepage	1.00
		Too acid	0.07	Too acid	0.07
Urban land	20	Not rated		Not rated	
LoC:					
Legore	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99		
		Too steep for sprinkler application	0.78		
Montalto	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.07	Too acid	0.07
Urban land	20	Not rated		Not rated	

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
LrD:					
Legore	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	0.99
		Filtering capacity	0.99		
		Too acid	0.99		
Relay	30	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	1.00	Too acid	0.42
		Too acid	0.42		
LrF:					
Legore	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	0.99
		Filtering capacity	0.99		
		Too acid	0.99		
Relay	30	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Slow water movement	1.00	Too acid	0.42
		Too acid	0.42		
MaB:					
Manor	85	Somewhat limited		Very limited	
		Too acid	0.42	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.42

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
MaC:					
Manor	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
MaD:					
Manor	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.42	Too acid	0.42
McD:					
Manor	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.42	Too acid	0.42
MgD:					
Manor	55	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.42	Too acid	0.42
Bannertown	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.96	Depth to bedrock	1.00
		Too acid	0.77	Too acid	0.77
		Depth to bedrock	0.46		
MgF:					
Manor	55	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.42	Too acid	0.42

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
MgF:					
Bannertown	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	0.96	Depth to bedrock	1.00
		Too acid	0.77	Too acid	0.77
		Depth to bedrock	0.46		
MkF:					
Manor	55	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.42	Too acid	0.42
Brinklow	30	Very limited		Very limited	
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Too acid	0.96
		Depth to bedrock	0.46	Seepage	0.62
		Slow water movement	0.37		
MoB:					
Mount Lucas	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Too steep for surface application	0.68	Depth to saturated zone	1.00
		Slow water movement	0.60	Too acid	0.42
		Too acid	0.42		
MoC:					
Mount Lucas	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to saturated zone	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Slow water movement	0.60	Too acid	0.42
		Too acid	0.42		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
OcB:					
Occoquan-----------	85	Somewhat limited		Very limited	
		Too steep for surface application	0.68	Seepage	1.00
		Too acid	0.42	Too acid	0.42
				Depth to bedrock	0.08
OcC:					
Occoquan-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
				Depth to bedrock	0.08
PfC:					
Patapsco-----------	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too acid	0.99
		Too acid	0.99	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10	Depth to saturated zone	0.02
		Droughty	0.03		
Fort Mott-----------	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Filtering capacity	0.99	Too steep for surface application	0.22
		Too acid	0.14	Too acid	0.14
		Too steep for sprinkler application	0.10		
RsB:					
Russett-------------	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Slow water movement	0.68	Depth to saturated zone	0.99
RsC:					
Russett-------------	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Slow water movement	0.68	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
RsD:					
Russett-------------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90	Depth to saturated zone	0.99
		Slow water movement	0.68		
RtB:					
Russett-------------	50	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Slow water movement	0.68	Depth to saturated zone	0.99
Alloway-------------	30	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
Hambrook------------	20	Somewhat limited		Very limited	
		Slow water movement	0.78	Seepage	1.00
		Too acid	0.21	Too acid	0.21
		Depth to saturated zone	0.02	Depth to saturated zone	0.02
RtC:					
Russett-------------	50	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Slow water movement	0.68	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		
Alloway-------------	30	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to saturated zone	0.99
		Depth to saturated zone	0.99	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
RtC:					
Hambrook	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Slow water movement	0.78	Too steep for surface application	0.22
		Too acid	0.21	Too acid	0.21
		Too steep for sprinkler application	0.10	Depth to saturated zone	0.02
		Depth to saturated zone	0.02		
RtD:					
Russett	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90	Depth to saturated zone	0.99
		Slow water movement	0.68		
Alloway	25	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too steep for sprinkler application	0.78		
Hambrook	15	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.78	Too steep for surface application	1.00
		Slow water movement	0.78	Too acid	0.21
		Too acid	0.21	Depth to saturated zone	0.02
		Depth to saturated zone	0.02		
RuB:					
Russett	50	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Slow water movement	0.68	Depth to saturated zone	0.99

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
RuB:					
Beltsville	35	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to cemented pan	1.00
		Depth to cemented pan	0.95	Too acid	1.00
		Droughty	0.35	Depth to saturated zone	0.99
		Slow water movement	0.34		
RuC:					
Russett	55	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Slow water movement	0.68	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		
Beltsville	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Depth to cemented pan	0.95	Depth to saturated zone	0.99
		Droughty	0.35	Too steep for surface application	0.22
SaB:					
Sassafras	85	Somewhat limited		Very limited	
		Too acid	0.21	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.21
SaC:					
Sassafras	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.21	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10	Too acid	0.21
SfB:					
Sassafras	85	Somewhat limited		Very limited	
		Too acid	0.21	Seepage	1.00
				Too acid	0.21

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SrC:					
Sassafras-----------	55	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.21	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10	Too acid	0.21
Croom---------------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Droughty	0.58	Too steep for surface application	0.22
		Slow water movement	0.22		
		Too steep for sprinkler application	0.10		
SrD:					
Sassafras-----------	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.90	Too steep for surface application	1.00
		Too acid	0.21	Too acid	0.21
Croom---------------	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	0.90	Too acid	1.00
		Droughty	0.58		
		Slow water movement	0.22		
SrE:					
Sassafras-----------	60	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.21	Too acid	0.21

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
SrE:					
Croom	30	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Droughty	0.58		
		Slow water movement	0.22		
UaF:					
Udorthents	100	Not rated		Not rated	
UbF:					
Udorthents	100	Not rated		Not rated	
UcB:					
Urban land	45	Not rated		Not rated	
Chillum	35	Very limited		Very limited	
		Too acid	0.99	Seepage	1.00
				Too acid	0.99
Beltsville	15	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to cemented pan	1.00
		Depth to cemented pan	0.95	Too acid	1.00
		Droughty	0.35	Depth to saturated zone	0.99
		Slow water movement	0.34		
UcD:					
Urban land	45	Not rated		Not rated	
Chillum	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.99	Too acid	0.99
		Too steep for sprinkler application	0.40	Too steep for surface application	0.78
Beltsville	15	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Depth to cemented pan	0.95	Depth to saturated zone	0.99
		Too steep for sprinkler application	0.40	Too steep for surface application	0.78

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
UdB:					
Udorthents----------	90	Very limited		Very limited	
		Too acid	1.00	Too acid	1.00
		Slow water movement	0.68	Seepage	0.31
UfA:					
Urban land----------	50	Not rated		Not rated	
Fallsington, undrained----------	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Filtering capacity	0.99	Too level	1.00
		Too acid	0.96	Ponding	1.00
				Too acid	0.96
UoE:					
Udorthents----------	100	Not rated		Not rated	
Ur:					
Urban land----------	85	Not rated		Not rated	
UsB:					
Urban land----------	50	Not rated		Not rated	
Sassafras-----------	30	Somewhat limited		Very limited	
		Too acid	0.21	Seepage	1.00
				Too acid	0.21
Beltsville----------	15	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to cemented pan	1.00
		Depth to cemented pan	0.95	Too acid	1.00
		Droughty	0.35	Depth to saturated zone	0.99
		Slow water movement	0.34		
UsD:					
Urban land----------	50	Not rated		Not rated	
Sassafras-----------	30	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.40	Too steep for surface application	0.78
		Too acid	0.21	Too acid	0.21

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
UsD:					
Beltsville	15	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	0.99	Too acid	1.00
		Depth to cemented pan	0.95	Depth to saturated zone	0.99
		Too steep for sprinkler application	0.40	Too steep for surface application	0.78
UtD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Very limited		Very limited	
		Too acid	1.00	Too acid	1.00
		Too steep for surface application	1.00	Seepage	0.31
		Slow water movement	0.68	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10		
UuB:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to bedrock	0.42
		Too acid	0.42	Too acid	0.42
		Too steep for surface application	0.08	Seepage	0.31
		Low adsorption	0.01	Low adsorption	0.01
UuD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to bedrock	0.42
		Too steep for sprinkler application	1.00	Too acid	0.42
		Too acid	0.42	Seepage	0.31
		Low adsorption	0.01	Low adsorption	0.01
UwC:					
Urban land	50	Not rated		Not rated	

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
UwC:					
Woodstown	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Too acid	0.55
		Too steep for sprinkler application	0.10	Too steep for surface application	0.22
Sassafras	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.21	Too steep for surface application	0.22
		Too steep for sprinkler application	0.10	Too acid	0.21
WaA:					
Watchung	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.68	Seepage	0.65
		Too acid	0.42	Too acid	0.42
WcB:					
Watchung	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.68	Seepage	0.65
		Too acid	0.42	Too acid	0.42
		Too steep for surface application	0.32		
WgB:					
Wheaton	60	Somewhat limited		Very limited	
		Too acid	0.91	Seepage	1.00
		Low adsorption	0.48	Too acid	0.91
		Too steep for surface application	0.08	Low adsorption	0.48
Glenelg	40	Somewhat limited		Very limited	
		Too acid	0.21	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.21
WgD:					
Wheaton	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
		Low adsorption	0.48	Low adsorption	0.48

Table 8b.--Agricultural Waste Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
WgD:					
Glenelg	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.21	Too acid	0.21
WhA:					
Wiltshire	85	Somewhat limited		Very limited	
		Depth to saturated zone	0.95	Seepage	1.00
		Depth to cemented pan	0.54	Depth to cemented pan	1.00
		Droughty	0.47	Depth to saturated zone	0.95
WhB:					
Wiltshire	85	Somewhat limited		Very limited	
		Depth to saturated zone	0.95	Seepage	1.00
		Depth to cemented pan	0.54	Depth to cemented pan	1.00
		Droughty	0.47	Depth to saturated zone	0.95
		Too steep for surface application	0.32		
WoA:					
Woodstown	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
				Depth to saturated zone	0.99
WoB:					
Woodstown	85	Very limited		Very limited	
		Too acid	1.00	Seepage	1.00
		Depth to saturated zone	0.99	Too acid	1.00
				Depth to saturated zone	0.99
ZbA:					
Zekiah	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00
Issue	40	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
				Too acid	1.00

Table 8c.--Agricultural Waste Management (Part 3)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:					
Alloway-------------	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.77	Slow water movement	0.96
				Too steep for surface application	0.08
BaA:					
Baile---------------	85	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
				Too acid	0.96
BeA:					
Benevola------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Slow water movement	0.21
BeB:					
Benevola------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12	Slow water movement	0.21
BeC:					
Benevola------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.21
BrC:					
Brinklow------------	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
				Slow water movement	0.26

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
BrD:					
Brinklow------------	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
				Slow water movement	0.26
BtF:					
Brinklow------------	50	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
				Slow water movement	0.26
Blocktown-----------	40	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
				Slow water movement	0.26
CeB:					
Chillum-------------	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	0.99
				Too steep for surface application	0.08
CeC:					
Chillum-------------	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
				Too steep for sprinkler irrigation	0.22
ChB:					
Chillum-------------	55	Very limited		Very limited	
		Slow water movement	1.00	Too acid	0.99
				Too steep for surface application	0.08

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
ChB:					
Russett	35	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
				Too steep for surface application	0.08
ChC:					
Chillum	55	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
				Too steep for sprinkler irrigation	0.22
Russett	35	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
				Too steep for sprinkler irrigation	0.22
Co:					
Codorus	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Slow water movement	1.00	Too acid	0.91
Hatboro	35	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
				Too acid	0.31
				Filtering capacity	0.01
Cp:					
Codorus, frequently flooded	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Slow water movement	1.00	Depth to saturated zone	0.99

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
Cp:					
Hatboro, frequently flooded	35	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	0.21
		Too acid	0.21		
CrD:					
Croom	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.07	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
				Slow water movement	0.15
Evesboro	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Too acid	0.01		
				Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.91
DhB:					
Downer	50	Somewhat limited		Very limited	
		Slow water movement	0.32	Filtering capacity	0.99
				Too acid	0.21
				Too steep for surface application	0.08
Hammonton	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Filtering capacity	0.99
		Slow water movement	0.32	Depth to saturated zone	0.99
				Too steep for surface application	0.08
				Too acid	0.07
DhC:					
Downer	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
				Filtering capacity	0.99
				Too steep for sprinkler irrigation	0.22
				Too acid	0.21

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
DhC:					
Hammonton-----------	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Filtering capacity	0.99
		Slow water movement	0.32	Depth to saturated zone	0.99
				Too steep for sprinkler irrigation	0.22
				Too acid	0.07
DhD:					
Downer--------------	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.21
Hammonton-----------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Filtering capacity	0.99
				Depth to saturated zone	0.99
				Too acid	0.07
DxC:					
Downer--------------	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Filtering capacity	0.99
				Too steep for sprinkler irrigation	0.22
				Too acid	0.21
Phalanx-------------	35	Very limited		Very limited	
		Slope	1.00	Too acid	1.00
		Slow water movement	0.94	Too steep for surface application	1.00
		Too acid	0.42	Too steep for sprinkler irrigation	0.22

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
EaB:					
Elioak	85	Very limited		Very limited	
		Slow water movement	1.00	Low adsorption	1.00
		Slope	0.50	Slow water movement	0.94
				Too steep for surface application	0.68
				Too acid	0.21
EbC:					
Evesboro	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Too acid	0.01	Filtering capacity	0.99
				Too acid	0.91
				Too steep for sprinkler irrigation	0.22
Fa:					
Fallsington, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Filtering capacity	0.99
		Too acid	0.14	Too acid	0.96
GaC:					
Gaila	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
GaD:					
Gaila	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
GbA:					
Gladstone	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.61	Too acid	0.14
				Filtering capacity	0.01

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
GbB:					
Gladstone-----------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.61	Too steep for surface application	0.32
		Slope	0.12	Too acid	0.14
				Filtering capacity	0.01
GbC:					
Gladstone-----------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too steep for sprinkler irrigation	1.00
				Too acid	0.14
				Filtering capacity	0.01
GcB:					
Gladstone-----------	55	Somewhat limited		Somewhat limited	
		Slow water movement	0.61	Too steep for surface application	0.68
		Slope	0.50	Too acid	0.14
				Filtering capacity	0.01
Legore--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Filtering capacity	0.99
		Slope	0.50	Too acid	0.99
				Slow water movement	0.96
				Too steep for surface application	0.68
GcC:					
Gladstone-----------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too steep for sprinkler irrigation	1.00
				Too acid	0.14
				Filtering capacity	0.01
Legore--------------	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GdC:					
Gladstone	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too steep for sprinkler irrigation	1.00
				Too acid	0.14
				Filtering capacity	0.01
Legore	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96
GdD:					
Gladstone	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too steep for sprinkler irrigation	1.00
				Too acid	0.14
				Filtering capacity	0.01
Legore	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96
GfB:					
Gladstone	50	Somewhat limited		Somewhat limited	
		Slow water movement	0.61	Too acid	0.14
				Too steep for surface application	0.08
				Filtering capacity	0.01
Urban land	40	Not rated		Not rated	

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
GfC:					
Gladstone-----------	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too steep for sprinkler irrigation	1.00
				Too acid	0.14
				Filtering capacity	0.01
Urban land----------	40	Not rated		Not rated	
GgA:					
Glenelg-------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.21
GgB:					
Glenelg-------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.68
		Slope	0.50	Too acid	0.21
GgC:					
Glenelg-------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
GhB:					
Glenelg-------------	45	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.21
				Too steep for surface application	0.08
Urban land----------	35	Not rated		Not rated	
GhC:					
Glenelg-------------	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
Urban land----------	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
GmA:					
Glenville-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	0.86	Too acid	0.21
GmB:					
Glenville-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	0.86	Too steep for surface application	0.68
		Slope	0.50	Too acid	0.21
GmC:					
Glenville-----------	85	Very limited		Very limited	
		Slope	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to saturated zone	0.86	Depth to saturated zone	0.86
				Too acid	0.21
GnB:					
Glenville-----------	50	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	0.86	Too acid	0.21
				Too steep for surface application	0.08
Baile---------------	35	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
				Too acid	0.96
				Too steep for surface application	0.08

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
GoB:					
Glenville-----------	60	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	0.86	Too acid	0.21
				Too steep for surface application	0.08
Codorus-------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Slow water movement	1.00	Too acid	0.91
		Flooding	0.60	Flooding	0.60
GuB:					
Glenville-----------	45	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	0.86	Too acid	0.21
				Too steep for surface application	0.08
Urban land----------	35	Not rated		Not rated	
Udorthents----------	20	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to bedrock	0.99
		Depth to saturated zone	1.00	Slow water movement	0.96
		Depth to bedrock	1.00	Too acid	0.42
				Too steep for surface application	0.08
Ha:					
Hatboro-------------	60	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
		Flooding	0.60	Flooding	0.60
				Too acid	0.31
Codorus-------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Slow water movement	1.00	Too acid	0.91
		Flooding	0.60	Flooding	0.60

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
JaB:					
Jackland	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
		Slope	0.50	Too steep for surface application	0.68
				Too acid	0.42
LaB:					
Legore	85	Very limited		Very limited	
		Slow water movement	1.00	Filtering capacity	0.99
		Slope	0.50	Too acid	0.99
				Slow water movement	0.96
				Too steep for surface application	0.68
LaC:					
Legore	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96
				Too steep for sprinkler irrigation	0.94
LeB:					
Legore	85	Very limited		Very limited	
		Slow water movement	1.00	Filtering capacity	0.99
		Slope	0.50	Too acid	0.99
				Slow water movement	0.96
				Too steep for surface application	0.68
LeC:					
Legore	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
LmB:					
Legore	55	Very limited		Very limited	
		Slow water movement	1.00	Filtering capacity	0.99
		Slope	0.50	Too acid	0.99
				Slow water movement	0.96
				Too steep for surface application	0.68
Montalto	30	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.68
		Slope	0.50	Too acid	0.07
LoB:					
Legore	40	Very limited		Very limited	
		Slow water movement	1.00	Filtering capacity	0.99
		Slope	0.50	Too acid	0.99
				Slow water movement	0.96
				Too steep for surface application	0.68
Montalto	35	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.08
				Too acid	0.07
Urban land	20	Not rated		Not rated	
LoC:					
Legore	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96
Montalto	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
Urban land	20	Not rated		Not rated	

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
LrD:					
Legore	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96
Relay	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	0.96
				Too acid	0.42
LrF:					
Legore	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Filtering capacity	0.99
				Too acid	0.99
				Slow water movement	0.96
Relay	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to bedrock	1.00	Slow water movement	0.96
				Too acid	0.42
MaB:					
Manor	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.42
				Too steep for surface application	0.08

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
MaC:					
Manor---------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
MaD:					
Manor---------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
McD:					
Manor---------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
MgD:					
Manor---------------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
Bannertown----------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
				Too acid	0.77
MgF:					
Manor---------------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
MgF:					
Bannertown----------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
				Too acid	0.77
MkF:					
Manor---------------	55	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
Brinklow-----------	30	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
				Slow water movement	0.26
MoB:					
Mount Lucas---------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	0.68
		Slope	0.50	Slow water movement	0.43
				Too acid	0.42
MoC:					
Mount Lucas---------	85	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00
				Slow water movement	0.43
				Too acid	0.42
OcB:					
Occoquan-----------	85	Very limited		Somewhat limited	
		Depth to bedrock	1.00	Too steep for surface application	0.68
		Slow water movement	1.00	Too acid	0.42
		Slope	0.50	Depth to bedrock	0.08

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
OcC:					
Occoquan	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Too acid	0.42
				Depth to bedrock	0.08
PfC:					
Patapsco	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Filtering capacity	0.99
		Slow water movement	0.32	Too acid	0.99
		Too acid	0.21	Too steep for sprinkler irrigation	0.22
				Depth to saturated zone	0.02
Fort Mott	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Filtering capacity	0.99
		Too acid	0.07	Too steep for sprinkler irrigation	0.22
				Too acid	0.14
RsB:					
Russett	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
RsC:					
Russett	85	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
				Too steep for sprinkler irrigation	0.22

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
RsD:					
Russett	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.85	Depth to saturated zone	0.99
				Slow water movement	0.50
RtB:					
Russett	50	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
Alloway	30	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.77	Slow water movement	0.96
Hambrook	20	Very limited		Somewhat limited	
		Slow water movement	1.00	Slow water movement	0.60
		Depth to saturated zone	1.00	Too acid	0.21
		Too acid	0.21	Depth to saturated zone	0.02
RtC:					
Russett	50	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
				Too steep for sprinkler irrigation	0.22
Alloway	30	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Slope	1.00	Depth to saturated zone	0.99
		Too acid	0.77	Slow water movement	0.96
				Too steep for sprinkler irrigation	0.22

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
RtC:					
Hambrook------------	20	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Slow water movement	0.60
		Slope	1.00	Too steep for sprinkler irrigation	0.22
		Too acid	0.21	Too acid	0.21
				Depth to saturated zone	0.02
RtD:					
Russett-------------	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.85	Depth to saturated zone	0.99
				Slow water movement	0.50
Alloway-------------	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	0.77	Depth to saturated zone	0.99
				Slow water movement	0.96
Hambrook------------	15	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to saturated zone	1.00	Slow water movement	0.60
		Too acid	0.21	Too acid	0.21
				Depth to saturated zone	0.02
RuB:					
Russett-------------	50	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
RuB:					
Beltsville----------	35	Very limited		Very limited	
		Slow water movement	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Slow water movement	0.24
RuC:					
Russett-------------	55	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Depth to saturated zone	0.99
		Too acid	0.85	Slow water movement	0.50
				Too steep for sprinkler irrigation	0.22
Beltsville----------	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Slow water movement	0.24
SaB:					
Sassafras-----------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.21
		Too acid	0.03	Too steep for surface application	0.08
SaC:					
Sassafras-----------	85	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.22
		Too acid	0.03	Too acid	0.21
SfB:					
Sassafras-----------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.21
		Too acid	0.03		

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
SrC:					
Sassafras-----------	55	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00		
		Too acid	0.03	Too steep for sprinkler irrigation	0.22
				Too acid	0.21
Croom---------------	35	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00		
		Too acid	0.07	Too acid	1.00
				Too steep for sprinkler irrigation	0.22
				Slow water movement	0.15
SrD:					
Sassafras-----------	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
Croom---------------	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.07	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
				Slow water movement	0.15
SrE:					
Sassafras-----------	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
Croom---------------	30	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.07	Too steep for sprinkler irrigation	1.00
				Too acid	1.00
				Slow water movement	0.15

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
UaF:					
Udorthents	100	Not rated		Not rated	
UbF:					
Udorthents	100	Not rated		Not rated	
UcB:					
Urban land	45	Not rated		Not rated	
Chillum	35	Very limited		Very limited	
		Slow water movement	1.00	Too acid	0.99
Beltsville	15	Very limited		Very limited	
		Slow water movement	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Slow water movement	0.24
UcD:					
Urban land	45	Not rated		Not rated	
Chillum	35	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.99
				Too steep for sprinkler irrigation	0.78
Beltsville	15	Very limited		Very limited	
		Slow water movement	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Too steep for sprinkler irrigation	0.78
UdB:					
Udorthents	90	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Slow water movement	0.50
		Too acid	0.03		
UfA:					
Urban land	50	Not rated		Not rated	

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
UfA:					
Fallsington, undrained	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Filtering capacity	0.99
		Too acid	0.14	Too acid	0.96
UoE:					
Udorthents	100	Not rated		Not rated	
Ur:					
Urban land	85	Not rated		Not rated	
UsB:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.21
		Too acid	0.03		
Beltsville	15	Very limited		Very limited	
		Slow water movement	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Slow water movement	0.24
UsD:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.78
		Too acid	0.03	Too acid	0.21
Beltsville	15	Very limited		Very limited	
		Slow water movement	1.00	Depth to cemented pan	1.00
		Depth to cemented pan	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	0.99
		Too acid	0.55	Too steep for sprinkler irrigation	0.78
UtD:					
Urban land	60	Not rated		Not rated	

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
UtD:					
Udorthents----------	40	Very limited		Very limited	
		Slow water movement	1.00	Too acid	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Slow water movement	0.50
		Too acid	0.03	Too steep for sprinkler irrigation	0.22
UuB:					
Urban land----------	60	Not rated		Not rated	
Udorthents----------	40	Very limited		Somewhat limited	
		Slow water movement	1.00	Slow water movement	0.96
		Depth to saturated zone	1.00	Depth to bedrock	0.42
		Depth to bedrock	1.00	Too acid	0.42
				Too steep for surface application	0.08
				Low adsorption	0.01
UuD:					
Urban land----------	60	Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
		Depth to bedrock	1.00	Depth to bedrock	0.42
				Too acid	0.42
UwC:					
Urban land----------	50	Not rated		Not rated	
Woodstown-----------	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Depth to saturated zone	0.99
		Slope	1.00	Too acid	0.55
		Too acid	0.21	Too steep for sprinkler irrigation	0.22
Sassafras-----------	20	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.22
		Too acid	0.03	Too acid	0.21

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
WaA:					
Watchung	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.50
				Too acid	0.42
WcB:					
Watchung	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.50
		Slope	0.12	Too acid	0.42
				Too steep for surface application	0.32
WgB:					
Wheaton	60	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.91
				Low adsorption	0.48
				Too steep for surface application	0.08
Glenelg	40	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.21
				Too steep for surface application	0.08
WgD:					
Wheaton	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
				Low adsorption	0.48
Glenelg	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
WhA:					
Wiltshire	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.95
		Depth to saturated zone	0.95		

Table 8c.--Agricultural Waste Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
WhB:					
Wiltshire	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slow water movement	1.00	Depth to saturated zone	0.95
		Depth to saturated zone	0.95	Too steep for surface application	0.32
		Slope	0.12		
WoA:					
Woodstown	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Too acid	1.00
		Slow water movement	1.00	Depth to saturated zone	0.99
WoB:					
Woodstown	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Too acid	1.00
		Slow water movement	1.00	Depth to saturated zone	0.99
ZbA:					
Zekiah	50	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.21		
Issue	40	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	1.00
		Too acid	0.21		

Table 9.--Forestland Productivity

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
AwB:				
Alloway	---	---	---	---
BaA:				
Baile	pin oak	85	57	eastern white pine, Norway spruce, white spruce
	red maple	60	40	
BeA:				
Benevola	black oak	85	72	black walnut, eastern white pine, northern red oak, white oak
	black walnut	65	47	
	northern red oak	85	72	
	white oak	85	72	
	yellow-poplar	95	100	
BeB:				
Benevola	black oak	85	72	black walnut, eastern white pine, northern red oak, white oak
	black walnut	65	47	
	northern red oak	85	72	
	white oak	85	72	
	yellow-poplar	95	100	
BeC:				
Benevola	black oak	85	72	black walnut, eastern white pine, northern red oak, white oak
	black walnut	65	47	
	northern red oak	85	72	
	white oak	85	72	
	yellow-poplar	95	100	
BrC:				
Brinklow	black oak	75	57	eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
BrD:				
Brinklow	black oak	75	57	eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
BtF:				
Brinklow	black oak	75	57	eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
Blocktown	black oak	70	57	eastern white pine, Virginia pine
	northern red oak	75	57	
	Virginia pine	70	114	
	white oak	60	43	
CeB:				
Chillum	loblolly pine	80	114	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	80	72	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
CeC:				
Chillum	loblolly pine	80	114	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	80	72	
ChB:				
Chillum	loblolly pine	80	114	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	80	72	
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
ChC:				
Chillum	loblolly pine	80	114	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	80	72	
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
Co:				
Codorus	black walnut	100	80	black walnut, eastern white pine, European larch, Norway spruce, sugar maple, white ash, yellow-poplar
	eastern white pine	100	143	
	northern red oak	90	72	
	sugar maple	90	57	
	white ash	90	72	
	yellow-poplar	100	114	
Hatboro	American sycamore	60	43	eastern white pine, white spruce
	pin oak	60	43	
	red maple	60	43	
Cp:				
Codorus, frequently flooded	black walnut	100	80	black walnut, eastern white pine, European larch, Norway spruce, sugar maple, white ash, yellow-poplar
	eastern white pine	100	143	
	northern red oak	90	72	
	sugar maple	90	57	
	white ash	90	72	
	yellow-poplar	100	114	
Hatboro, frequently flooded	American sycamore	60	43	eastern white pine, white spruce
	pin oak	60	43	
	red maple	60	43	
CrD:				
Croom	Virginia pine	60	86	loblolly pine, Virginia pine
	white oak	60	43	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
CrD:				
Evesboro	loblolly pine	70	101	loblolly pine, Virginia pine, white oak
	Virginia pine	70	109	
	northern red oak	70	52	
	southern red oak	70	50	
	white oak	70	40	
	yellow-poplar	70	64	
	red maple	65	40	
DhB:				
Downer	loblolly pine	70	101	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	northern red oak	80	62	
	southern red oak	85	75	
	white oak	80	55	
	yellow-poplar	90	90	
	red maple	75	47	
	sweetgum	80	79	
Hammonton	loblolly pine	70	101	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	northern red oak	70	52	
	southern red oak	75	57	
	white oak	80	55	
	yellow-poplar	85	81	
	red maple	75	47	
	sweetgum	80	79	
DhC:				
Downer	loblolly pine	70	101	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	northern red oak	80	62	
	southern red oak	85	75	
	white oak	80	55	
	yellow-poplar	90	90	
	red maple	75	47	
	sweetgum	80	79	
Hammonton	loblolly pine	70	101	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	northern red oak	70	52	
	southern red oak	75	57	
	white oak	80	55	
	yellow-poplar	85	81	
	red maple	75	47	
	sweetgum	80	79	
DhD:				
Downer	loblolly pine	70	101	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	northern red oak	80	62	
	southern red oak	85	75	
	white oak	80	55	
	yellow-poplar	90	90	
	red maple	75	47	
	sweetgum	80	79	
Hammonton	loblolly pine	70	101	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	northern red oak	70	52	
	southern red oak	75	57	
	white oak	80	55	
	yellow-poplar	85	81	
	red maple	75	47	
	sweetgum	80	79	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
DxC:				
Downer	loblolly pine	70	101	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	northern red oak	80	62	
	southern red oak	85	75	
	white oak	80	55	
	yellow-poplar	90	90	
	red maple	75	47	
	sweetgum	80	79	
Phalanx	black oak	70	57	---
	chestnut oak	70	57	
	pitch pine	---	0	
	Virginia pine	70	114	
	white oak	70	57	
EaB:				
Elioak	black oak	80	57	eastern white pine, loblolly pine, yellow-poplar
	shortleaf pine	70	114	
	Virginia pine	75	114	
	yellow-poplar	90	86	
EbC:				
Evesboro	loblolly pine	70	101	loblolly pine, Virginia pine, white oak
	Virginia pine	70	109	
	northern red oak	70	52	
	southern red oak	70	50	
	white oak	70	40	
	yellow-poplar	70	64	
	red maple	65	40	
Fa:				
Fallsington, undrained	blackgum	70	75	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	loblolly pine	90	129	
	red maple	70	43	
	southern red oak	75	57	
	swamp chestnut oak	75	57	
	sweetgum	80	79	
	white oak	75	47	
	willow oak	75	62	
GaC:				
Gaila	northern red oak	60	43	black walnut, loblolly pine, shortleaf pine
	shortleaf pine	70	114	
	Virginia pine	70	114	
	yellow-poplar	80	72	
GaD:				
Gaila	northern red oak	60	43	black walnut, eastern white pine, shortleaf pine
	shortleaf pine	70	114	
	Virginia pine	70	114	
	yellow-poplar	80	72	
GbA:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
GbB:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
GbC:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
GcB:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
GcC:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
GdC:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
GdD:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
GdD:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
GfB:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
Urban land	---	---	---	---
GfC:				
Gladstone	northern red oak	75	57	black walnut, eastern white pine, Norway spruce, yellow-poplar
	white oak	75	55	
	yellow-poplar	95	100	
Urban land	---	---	---	---
GgA:				
Glenelg	black oak	78	57	black walnut, eastern white pine, shortleaf pine, yellow-poplar
	hickory	75	55	
	shortleaf pine	70	114	
	white oak	75	57	
	yellow-poplar	87	86	
GgB:				
Glenelg	black oak	78	57	black walnut, eastern white pine, eastern white pine, shortleaf pine, yellow-poplar
	white oak	75	57	
	yellow-poplar	87	86	
GgC:				
Glenelg	black oak	78	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	75	55	
	northern red oak	80	57	
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	75	57	
	yellow-poplar	87	86	
GhB:				
Glenelg	black oak	78	57	black walnut, eastern white pine, eastern white pine, shortleaf pine, yellow-poplar
	hickory	75	55	
	northern red oak	80	114	
	white oak	75	57	
	yellow-poplar	87	86	
Urban land	---	---	---	---

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
GhC:				
Glenelg	black oak	78	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	75	55	
	northern red oak	80	57	
	shortleaf pine	70	114	
	Virginia pine	70	114	
	white oak	75	57	
	yellow-poplar	87	86	
Urban land	---	---	---	---
GmA:				
Glenville	northern red oak	80	57	eastern white pine, sweetgum, yellow-poplar
	red maple	80	57	
	white ash	80	57	
	yellow-poplar	90	86	
GmB:				
Glenville	northern red oak	80	57	eastern white pine, sweetgum, yellow-poplar
	red maple	80	57	
	white ash	80	57	
	yellow-poplar	90	86	
GmC:				
Glenville	northern red oak	80	57	eastern white pine, Norway spruce, sweetgum, yellow-poplar
	red maple	80	57	
	white ash	80	57	
	yellow-poplar	90	86	
GnB:				
Glenville	northern red oak	80	57	eastern white pine, Norway spruce, sweetgum, yellow-poplar
	red maple	80	57	
	white ash	80	57	
	yellow-poplar	90	86	
Baile	pin oak	85	57	eastern white pine, Norway spruce, white spruce
	red maple	60	40	
GoB:				
Glenville	northern red oak	80	57	eastern white pine, Norway spruce, sweetgum, yellow-poplar
	red maple	80	57	
	white ash	80	57	
	yellow-poplar	90	86	
Codorus	black walnut	100	80	black walnut, eastern white pine, Norway spruce, white ash, yellow-poplar
	eastern white pine	100	143	
	northern red oak	90	72	
	white ash	90	72	
	yellow-poplar	100	114	
GuB:				
Glenville	northern red oak	80	57	eastern white pine, Norway spruce, yellow-poplar
	red maple	80	57	
	white ash	80	57	
	yellow-poplar	90	86	
Urban land	---	---	---	---
Udorthents	---	---	---	---

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
Ha:				
Hatboro	American sycamore	60	43	eastern white pine, white spruce
	pin oak	60	43	
	red maple	60	43	
Codorus	black walnut	100	80	black walnut, eastern white pine, Norway spruce, sugar maple, white ash, yellow-poplar
	eastern white pine	100	143	
	northern red oak	90	72	
	sugar maple	90	57	
	white ash	90	72	
	yellow-poplar	100	114	
JaB:				
Jackland	loblolly pine	70	86	eastern white pine, Norway spruce, sweetgum
	northern red oak	60	43	
	Virginia pine	60	86	
	yellow-poplar	74	57	
LaB:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
LaC:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
LeB:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
LeC:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
LmB:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
Montalto	black oak	76	57	black walnut, eastern white pine, yellow-poplar
	eastern white pine	90	172	
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
LoB:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
Montalto	black oak	76	57	black walnut, eastern white pine, yellow-poplar
	eastern white pine	90	172	
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	90	86	
Urban land	---	---	---	---
LoC:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
Montalto	black oak	76	57	black walnut, eastern white pine, loblolly pine, yellow-poplar
	eastern white pine	90	172	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	90	86	
Urban land	---	---	---	---
LrD:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
Relay	black oak	76	57	black walnut, eastern white pine, yellow-poplar
	eastern white pine	90	172	
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	90	86	
LrF:				
Legore	black oak	75	57	black walnut, eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	shortleaf pine	75	114	
	Virginia pine	75	114	
	yellow-poplar	85	86	
Relay	---	---	---	---
MaB:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
MaC:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	
MaD:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	
McD:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	
MgD:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	
Bannertown	shortleaf pine	57	82	eastern white pine, shortleaf pine, yellow-poplar
	eastern white pine	81	146	
	Virginia pine	62	95	
	northern red oak	80	75	
	chestnut oak	70	52	
MgF:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	
Bannertown	shortleaf pine	57	82	eastern white pine, shortleaf pine
	eastern white pine	81	146	
	Virginia pine	62	95	
	northern red oak	80	75	
	chestnut oak	70	52	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
MkF:				
Manor	black oak	80	57	black walnut, eastern white pine, shortleaf pine, Virginia pine, yellow-poplar
	hickory	65	47	
	northern red oak	80	57	
	shortleaf pine	80	129	
	Virginia pine	80	114	
	white oak	70	55	
	yellow-poplar	90	86	
Brinklow	black oak	75	57	eastern white pine, Virginia pine, yellow-poplar
	northern red oak	80	57	
	white oak	70	57	
	yellow-poplar	90	86	
MoB:				
Mount Lucas	northern red oak	80	57	eastern white pine, sweetgum, Virginia pine, yellow-poplar
	Virginia pine	75	114	
	yellow-poplar	90	86	
MoC:				
Mount Lucas	northern red oak	80	57	eastern white pine, sweetgum, Virginia pine, yellow-poplar
	Virginia pine	75	114	
	yellow-poplar	90	86	
OcB:				
Occoquan	northern red oak	80	57	eastern white pine, shortleaf pine, yellow-poplar
	Virginia pine	60	43	
	white oak	60	86	
	yellow-poplar	70	57	
OcC:				
Occoquan	northern red oak	80	57	eastern white pine, hemlock, shortleaf pine, yellow-poplar
	Virginia pine	60	43	
	white oak	60	86	
	yellow-poplar	70	57	
PfC:				
Patapsco	black oak	70	57	Virginia pine
	chestnut oak	70	57	
	pitch pine	60	0	
	shortleaf pine	60	86	
	Virginia pine	70	114	
	white oak	70	57	
Fort Mott	loblolly pine	75	105	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	65	40	
	northern red oak	70	52	
	southern red oak	80	65	
	white oak	70	40	
	yellow-poplar	75	68	
	Virginia pine	70	109	
RsB:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
RsC:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
RsD:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
RtB:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
Alloway	---	---	---	---
Hambrook	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	80	79	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
RtC:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
Alloway	---	---	---	---
Hambrook	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	80	79	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
RtD:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
Alloway	American beech	80	57	loblolly pine, northern red oak, yellow-poplar
	loblolly pine	80	114	
	northern red oak	80	57	
	yellow-poplar	90	86	
Hambrook	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	80	79	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
RuB:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
Beltsville	black oak	70	57	loblolly pine, Virginia pine
	loblolly pine	70	86	
	red maple	60	43	
	sweetgum	65	50	
	Virginia pine	70	114	
	white oak	70	57	
RuC:				
Russett	loblolly pine	90	129	eastern white pine, loblolly pine, sweetgum, yellow-poplar
	northern red oak	80	57	
	sweetgum	90	100	
	yellow-poplar	90	86	
Beltsville	black oak	70	57	loblolly pine, Virginia pine
	loblolly pine	70	86	
	red maple	60	43	
	sweetgum	65	50	
	Virginia pine	70	114	
	white oak	70	57	
SaB:				
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
SaC:				
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
SfB:				
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
SrC:				
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
SrC:				
Croom	Virginia pine	60	86	loblolly pine, Virginia pine
	white oak	60	43	
SrD:				
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
Croom	Virginia pine	60	86	loblolly pine, Virginia pine
	white oak	60	43	
SrE:				
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
Croom	Virginia pine	60	86	loblolly pine, Virginia pine
	white oak	60	43	
UaF:				
Udorthents	---	---	---	---
UbF:				
Udorthents	---	---	---	---
UcB:				
Urban land	---	---	---	---
Chillum	loblolly pine	80	114	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	80	72	
Beltsville	black oak	70	57	loblolly pine, Virginia pine
	loblolly pine	70	86	
	red maple	60	43	
	sweetgum	65	50	
	Virginia pine	70	114	
	white oak	70	57	
UcD:				
Urban land	---	---	---	---
Chillum	loblolly pine	80	114	eastern white pine, loblolly pine, yellow-poplar
	Virginia pine	70	114	
	white oak	70	57	
	yellow-poplar	80	72	
Beltsville	black oak	70	57	loblolly pine, Virginia pine
	loblolly pine	70	86	
	red maple	60	43	
	sweetgum	65	50	
	Virginia pine	70	114	
	white oak	70	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
UdB:				
Udorthents	---	---	---	---
UfA:				
Urban land	---	---	---	---
Fallsington, undrained	blackgum	70	75	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	loblolly pine	90	129	
	red maple	70	43	
	southern red oak	75	57	
	swamp chestnut oak	75	57	
	sweetgum	80	79	
	white oak	75	47	
	willow oak	75	62	
UoE:				
Udorthents	---	---	---	---
Ur:				
Urban land	---	---	---	---
UsB:				
Urban land	---	---	---	---
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
Beltsville	black oak	70	57	loblolly pine, Virginia pine
	loblolly pine	70	86	
	red maple	60	43	
	sweetgum	65	50	
	Virginia pine	70	114	
	white oak	70	57	
UsD:				
Urban land	---	---	---	---
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
Beltsville	black oak	70	57	loblolly pine, Virginia pine
	loblolly pine	70	86	
	red maple	60	43	
	sweetgum	65	50	
	Virginia pine	70	114	
	white oak	70	57	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
UtD:				
Urban land	---	---	---	---
Udorthents	---	---	---	---
UuB:				
Urban land	---	---	---	---
Udorthents	---	---	---	---
UuD:				
Urban land	---	---	---	---
Udorthents	---	---	---	---
UwC:				
Urban land	---	---	---	---
Woodstown	loblolly pine	80	110	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	red maple	75	47	
	sweetgum	90	106	
	northern red oak	80	62	
	southern red oak	85	75	
	white oak	80	55	
	yellow-poplar	85	81	
Sassafras	loblolly pine	80	110	loblolly pine, southern red oak, northern red oak, yellow-poplar, eastern white pine, white oak
	red maple	75	47	
	sweetgum	85	93	
	northern red oak	90	85	
	southern red oak	90	85	
	white oak	85	65	
	yellow-poplar	90	90	
WaA:				
Watchung	black oak	80	57	eastern white pine, Norway spruce
	pin oak	85	72	
WcB:				
Watchung	northern red oak	80	57	eastern white pine, Norway spruce
	pin oak	85	57	
WgB:				
Wheaton	northern red oak	68	57	black walnut, eastern white pine, loblolly pine, western larch, yellow-poplar
	white oak	78	57	
	yellow-poplar	87	86	
Glenelg	black oak	78	57	black walnut, eastern white pine, eastern white pine, Japanese larch, shortleaf pine, yellow-poplar
	eastern white pine	90	172	
	hickory	75	55	
	red maple	80	57	
	shortleaf pine	70	114	
	white oak	75	57	
	yellow-poplar	87	86	

Table 9.--Forestland Productivity--Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
WgD:				
Wheaton	northern red oak	68	57	black walnut, eastern white pine, loblolly pine, western larch, yellow-poplar
	white oak	78	57	
	yellow-poplar	87	86	
Glenelg	black oak	78	57	black walnut, eastern white pine, Japanese larch, shortleaf pine, Virginia pine, yellow-poplar
	eastern white pine	90	172	
	hickory	75	55	
	red maple	80	57	
	shortleaf pine	70	114	
	white oak	75	57	
	yellow-poplar	87	86	
WhA:				
Wiltshire	northern red oak	80	57	eastern white pine, Japanese larch, Norway spruce, yellow-poplar
	white ash	80	57	
	yellow-poplar	90	86	
WhB:				
Wiltshire	northern red oak	80	57	eastern white pine, Japanese larch, Norway spruce, yellow-poplar
	white ash	80	57	
	yellow-poplar	90	86	
WoA:				
Woodstown	loblolly pine	80	110	loblolly pine, northern red oak, southern red oak, yellow-poplar, white oak
	red maple	75	47	
	sweetgum	90	106	
	northern red oak	80	62	
	southern red oak	85	75	
	white oak	80	55	
	yellow-poplar	85	81	
WoB:				
Woodstown	loblolly pine	85	114	eastern white pine, loblolly pine, yellow-poplar
	northern red oak	---	0	
	sweetgum	90	100	
	white oak	80	57	
	yellow-poplar	90	86	
ZbA:				
Zekiah	red maple	60	36	baldcypress, Atlantic white cedar, green ash, swamp chestnut oak, willow oak, water oak
	sweetgum	80	79	
	blackgum	50	40	
	swamp chestnut oak	70	50	
Issue	eastern cottonwood	105	143	eastern cottonwood, loblolly pine, yellow-poplar
	loblolly pine	100	129	
	sweetgum	100	143	
	water oak	100	100	

Table 10a.--Forestland Management (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway	85	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
BaA:							
Baile	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Ponding	1.00	Low strength	1.00
				Wetness	1.00		
				Low strength	0.50		
BeA:							
Benevola	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
BeB:							
Benevola	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
BeC:							
Benevola	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
BrC:							
Brinklow	85	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
BrD:							
Brinklow	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
		Restrictive layer	0.50	Low strength	0.50		
BtF:							
Brinklow	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Blocktown	40	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
CeB:							
Chillum	85	Slight		Well suited		Severe	
						Low strength	1.00
CeC:							
Chillum	85	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
ChB:							
Chillum	55	Slight		Well suited		Severe	
						Low strength	1.00
Russett	35	Slight		Well suited		Moderate	
						Low strength	0.50

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ChC:							
Chillum-------------	55	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Russett-------------	35	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Co:							
Codorus-------------	50	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Hatboro-------------	35	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Low strength	0.50		
		Low strength	0.50				
Cp:							
Codorus, frequently flooded------------	50	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Hatboro, frequently flooded------------	35	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Low strength	0.50		
		Low strength	0.50				
CrD:							
Croom---------------	55	Moderate		Poorly suited		Severe	
		Low strength	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Evesboro------------	30	Slight		Poorly suited		Moderate	
				Slope	1.00	Low strength	0.50
DhB:							
Downer--------------	50	Slight		Well suited		Moderate	
						Low strength	0.50
Hammonton-----------	30	Slight		Well suited		Moderate	
						Low strength	0.50
DhC:							
Downer--------------	50	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Hammonton-----------	30	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
DhD:							
Downer--------------	50	Slight		Poorly suited		Moderate	
				Slope	1.00	Low strength	0.50
Hammonton-----------	35	Slight		Poorly suited		Moderate	
				Slope	1.00	Low strength	0.50
DxC:							
Downer--------------	50	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
DxC:							
Phalanx	35	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
EaB:							
Elioak	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
EbC:							
Evesboro	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Fa:							
Fallsington, undrained	85	Moderate		Poorly suited		Moderate	
		Sandiness	0.50	Ponding	1.00	Low strength	0.50
				Sandiness	0.50		
				Wetness	0.50		
GaC:							
Gaila	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
GaD:							
Gaila	85	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
GbA:							
Gladstone	85	Slight		Well suited		Moderate	
						Low strength	0.50
GbB:							
Gladstone	85	Slight		Well suited		Moderate	
						Low strength	0.50
GbC:							
Gladstone	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
GcB:							
Gladstone	55	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Legore	30	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
GcC:							
Gladstone	55	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Legore	30	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
GdC:							
Gladstone	55	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Legore	30	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GdD:							
Gladstone-----------	55	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
Legore--------------	30	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
GfB:							
Gladstone-----------	50	Slight		Well suited		Moderate	
						Low strength	0.50
Urban land----------	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone-----------	45	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Urban land----------	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
GgB:							
Glenelg-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
GgC:							
Glenelg-------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
GhB:							
Glenelg-------------	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Urban land----------	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg-------------	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	30	Not rated		Not rated		Not rated	
GmA:							
Glenville-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
GmB:							
Glenville-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
GmC:							
Glenville-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
GnB:							
Glenville-----------	50	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Baile---------------	35	Moderate		Poorly suited		Severe	
		Low strength	0.50	Ponding	1.00	Low strength	1.00
				Wetness	1.00		
				Low strength	0.50		
GoB:							
Glenville-----------	60	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Codorus-------------	35	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
GuB:							
Glenville-----------	45	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Urban land----------	35	Not rated		Not rated		Not rated	
Udorthents----------	20	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Ha:							
Hatboro-------------	60	Severe		Poorly suited		Severe	
		Flooding	1.00	Ponding	1.00	Low strength	1.00
		Low strength	0.50	Flooding	1.00		
				Wetness	1.00		
				Low strength	0.50		
Codorus-------------	35	Moderate		Moderately suited		Severe	
		Flooding	0.50	Flooding	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
JaB:							
Jackland------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
				Wetness	0.50		
LaB:							
Legore--------------	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
LaC:							
Legore--------------	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
LeB:							
Legore--------------	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
LeC:							
Legore--------------	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LmB:							
Legore	55	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
Montalto	30	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
				Slope	0.50		
LoB:							
Legore	40	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
Montalto	35	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
Montalto	30	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land	20	Not rated		Not rated		Not rated	
LrD:							
Legore	55	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
Relay	30	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
LrF:							
Legore	55	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Low strength	0.50				
Relay	30	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
MaB:							
Manor	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
MaC:							
Manor	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
MaD:							
Manor	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
McD:							
Manor	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MgD:							
Manor---------------	55	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Bannertown----------	35	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
MgF:							
Manor---------------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Bannertown----------	35	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
MkF:							
Manor---------------	55	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Brinklow------------	30	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
MoB:							
Mount Lucas---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Wetness	0.50	Low strength	1.00
				Low strength	0.50		
				Slope	0.50		
MoC:							
Mount Lucas---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Wetness	0.50		
				Low strength	0.50		
OcB:							
Occoquan------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
OcC:							
Occoquan------------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
PfC:							
Patapsco------------	50	Moderate		Moderately suited		Moderate	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
		Landslides	0.10	Slope	0.50		
				Landslides	0.10		
Fort Mott-----------	40	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
RsB:							
Russett-------------	85	Slight		Well suited		Moderate	
						Low strength	0.50

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RsC:							
Russett-------------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
RsD:							
Russett-------------	85	Slight		Poorly suited		Moderate	
				Slope	1.00	Low strength	0.50
RtB:							
Russett-------------	50	Slight		Well suited		Moderate	
						Low strength	0.50
Alloway-------------	30	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
Hambrook------------	20	Slight		Well suited		Moderate	
						Low strength	0.50
RtC:							
Russett-------------	50	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Alloway-------------	30	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
				Slope	0.50		
Hambrook------------	20	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
RtD:							
Russett-------------	60	Slight		Poorly suited		Moderate	
				Slope	1.00	Low strength	0.50
Alloway-------------	25	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Hambrook------------	15	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
RuB:							
Russett-------------	50	Slight		Well suited		Moderate	
						Low strength	0.50
Beltsville----------	35	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
RuC:							
Russett-------------	55	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Beltsville----------	30	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
				Slope	0.50		
SaB:							
Sassafras-----------	85	Slight		Well suited		Moderate	
						Low strength	0.50

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
SaC:							
Sassafras-----------	85	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
SfB:							
Sassafras-----------	85	Slight		Well suited		Moderate	
						Low strength	0.50
SrC:							
Sassafras-----------	55	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Croom---------------	35	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
				Slope	0.50		
SrD:							
Sassafras-----------	50	Slight		Poorly suited		Moderate	
				Slope	1.00	Low strength	0.50
Croom---------------	35	Moderate		Poorly suited		Severe	
		Low strength	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
SrE:							
Sassafras-----------	60	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
Croom---------------	30	Severe		Poorly suited		Severe	
		Landslides	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Landslides	1.00		
				Low strength	0.50		
UaF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UcB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum-------------	35	Slight		Well suited		Severe	
						Low strength	1.00
Beltsville----------	15	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
UcD:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum-------------	35	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
Beltsville----------	15	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
UdB:							
Udorthents----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UfA:							
Urban land----------	50	Not rated		Not rated		Not rated	
Fallsington, undrained----------	30	Moderate		Poorly suited		Moderate	
		Sandiness	0.50	Ponding	1.00	Low strength	0.50
				Sandiness	0.50		
				Wetness	0.50		
UoE:							
Udorthents----------	100	Not rated		Not rated		Not rated	
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
UsB:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Slight		Well suited		Moderate	
						Low strength	0.50
Beltsville----------	15	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Beltsville----------	15	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	

Table 10a.--Forestland Management (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UwC:							
Woodstown-----------	25	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
Sassafras-----------	20	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
WaA:							
Watchung------------	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
WcB:							
Watchung------------	85	Moderate		Poorly suited		Severe	
		Low strength	0.50	Wetness	1.00	Low strength	1.00
				Low strength	0.50		
WgB:							
Wheaton-------------	60	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
Glenelg-------------	40	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
WgD:							
Wheaton-------------	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Glenelg-------------	40	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
WhA:							
Wiltshire-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
WhB:							
Wiltshire-----------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
WoA:							
Woodstown-----------	85	Slight		Well suited		Moderate	
						Low strength	0.50
WoB:							
Woodstown-----------	85	Slight		Well suited		Moderate	
						Low strength	0.50
ZbA:							
Zekiah--------------	50	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Wetness	1.00	Wetness	1.00	Wetness	0.50
		Low strength	0.50	Sandiness	0.50		
		Sandiness	0.50	Low strength	0.50		
Issue---------------	40	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		

Table 10b.--Forestland Management (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
AwB:							
Alloway	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
BaA:							
Baile	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	1.00
						Low strength	0.50
BeA:							
Benevola	85	Slight		Slight		Moderately suited	
						Low strength	0.50
BeB:							
Benevola	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
BeC:							
Benevola	85	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95	Low strength	0.50
BrC:							
Brinklow	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50	Low strength	0.50
BrD:							
Brinklow	85	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodiblity	0.95	Low strength	0.50
BtF:							
Brinklow	50	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95	Low strength	0.50
Blocktown	40	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95	Low strength	0.50
CeB:							
Chillum	85	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
CeC:							
Chillum	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
ChB:							
Chillum	55	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
ChB:							
Russett	35	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
ChC:							
Chillum	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Russett	35	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Co:							
Codorus	50	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
Hatboro	35	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
Cp:							
Codorus, frequently flooded	50	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
Hatboro, frequently flooded	35	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
CrD:							
Croom	55	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
Evesboro	30	Slight		Moderate		Poorly suited	
				Slope	0.50	Slope	1.00
				Erodibility	0.50		
DhB:							
Downer	50	Slight		Slight		Well suited	
Hammonton	30	Slight		Slight		Well suited	
DhC:							
Downer	50	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Hammonton	30	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
DhD:							
Downer	50	Slight		Moderate		Poorly suited	
				Slope	0.50	Slope	1.00
				Erodibility	0.50		

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
DhD:							
Hammonton	35	Slight		Severe		Poorly suited	
				Slope	0.95	Slope	1.00
				Erodibility	0.95		
DxC:							
Downer	50	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Phalanx	35	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
EaB:							
Elioak	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
EbC:							
Evesboro	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Fa:							
Fallsington, undrained	85	Slight		Slight		Poorly suited	
						Ponding	1.00
						Sandiness	0.50
						Wetness	0.50
GaC:							
Gaila	85	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
GaD:							
Gaila	85	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
GbA:							
Gladstone	85	Slight		Slight		Well suited	
GbB:							
Gladstone	85	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
GbC:							
Gladstone	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
GcB:							
Gladstone	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Legore	30	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
GcC:							
Gladstone	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Legore	30	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
GdC:							
Gladstone	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Legore	30	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
GdD:							
Gladstone	55	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
Legore	30	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
GfB:							
Gladstone	50	Slight		Slight		Well suited	
Urban land	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone	45	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Urban land	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg	85	Slight		Slight		Moderately suited	
						Low strength	0.50
GgB:							
Glenelg	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
GgC:							
Glenelg	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50	Low strength	0.50
GhB:							
Glenelg	45	Slight		Slight		Moderately suited	
						Low strength	0.50
Urban land	35	Not rated		Not rated		Not rated	

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GhC:							
Glenelg-------------	45	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50	Low strength	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
GmA:							
Glenville-----------	85	Slight		Slight		Moderately suited	
						Low strength	0.50
GmB:							
Glenville-----------	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
GmC:							
Glenville-----------	85	Moderate		Severe		Moderately suited	
		Slope	0.50	Slope	0.95	Slope	0.50
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
GnB:							
Glenville-----------	50	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
Baile---------------	35	Slight		Moderate		Poorly suited	
				Slope	0.50	Ponding	1.00
				Erodibility	0.50	Wetness	1.00
						Low strength	0.50
GoB:							
Glenville-----------	60	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
Codorus-------------	35	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50
GuB:							
Glenville-----------	45	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
Urban land----------	35	Not rated		Not rated		Not rated	
Udorthents----------	20	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
Ha:							
Hatboro-------------	60	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Wetness	1.00
						Low strength	0.50
Codorus-------------	35	Slight		Slight		Moderately suited	
						Flooding	0.50
						Low strength	0.50

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
JaB:							
Jackland------------	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
						Wetness	0.50
LaB:							
Legore--------------	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
LaC:							
Legore--------------	85	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
LeB:							
Legore--------------	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
LeC:							
Legore--------------	85	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
LmB:							
Legore--------------	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Montalto------------	30	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
LoB:							
Legore--------------	40	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Montalto------------	35	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
Urban land----------	20	Not rated		Not rated		Not rated	
LoC:							
Legore--------------	40	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
Montalto------------	30	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95	Low strength	0.50
Urban land----------	20	Not rated		Not rated		Not rated	
LrD:							
Legore--------------	55	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
LrD:							
Relay	30	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
LrF:							
Legore	55	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95		
Relay	30	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95		
MaB:							
Manor	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
MaC:							
Manor	85	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95	Low strength	0.50
MaD:							
Manor	85	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
McD:							
Manor	85	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
MgD:							
Manor	55	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
Bannertown	35	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
MgF:							
Manor	55	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95	Low strength	0.50
Bannertown	35	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95		
MkF:							
Manor	55	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95	Low strength	0.50
Brinklow	30	Severe		Severe		Poorly suited	
		Slope	0.75	Slope	0.95	Slope	1.00
		Erodibility	0.75	Erodibility	0.95	Low strength	0.50

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
MoB:							
Mount Lucas	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Wetness	0.50
				Erodibility	0.50	Low strength	0.50
						Slope	0.50
MoC:							
Mount Lucas	85	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95	Wetness	0.50
						Low strength	0.50
OcB:							
Occoquan	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
OcC:							
Occoquan	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50	Low strength	0.50
PfC:							
Patapsco	50	Slight		Moderate		Moderately suited	
				Slope	0.50	Sandiness	0.50
				Erodibility	0.50	Slope	0.50
						Landslides	0.10
Fort Mott	40	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
RsB:							
Russett	85	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
RsC:							
Russett	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
RsD:							
Russett	85	Slight		Severe		Poorly suited	
				Slope	0.95	Slope	1.00
				Erodibility	0.95		
RtB:							
Russett	50	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
Alloway	30	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
Hambrook	20	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RtC:							
Russett-------------	50	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Alloway-------------	30	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
Hambrook------------	20	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
RtD:							
Russett-------------	60	Slight		Severe		Poorly suited	
				Slope	0.95	Slope	1.00
				Erodibility	0.95		
Alloway-------------	25	Moderate		Severe		Moderately suited	
		Slope	0.50	Slope	0.95	Slope	0.50
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
Hambrook------------	15	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
RuB:							
Russett-------------	50	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
Beltsville----------	35	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
RuC:							
Russett-------------	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Beltsville----------	30	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
SaB:							
Sassafras-----------	85	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
SaC:							
Sassafras-----------	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
SfB:							
Sassafras-----------	85	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
SrC:							
Sassafras-----------	55	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
SrC:							
Croom	35	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50	Slope	0.50
SrD:							
Sassafras	50	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
Croom	35	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
SrE:							
Sassafras	60	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95		
Croom	30	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Landslides	1.00
						Low strength	0.50
UaF:							
Udorthents	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents	100	Not rated		Not rated		Not rated	
UcB:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
Beltsville	15	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
UcD:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Slight		Severe		Moderately suited	
				Slope	0.95	Slope	0.50
				Erodibility	0.95		
Beltsville	15	Moderate		Severe		Moderately suited	
		Slope	0.50	Slope	0.95	Slope	0.50
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
UdB:							
Udorthents	90	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
UfA:							
Urban land	50	Not rated		Not rated		Not rated	

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
UfA:							
Fallsington, undrained	30	Slight		Slight		Poorly suited	
						Ponding	1.00
						Sandiness	0.50
						Wetness	0.50
UoE:							
Udorthents	100	Not rated		Not rated		Not rated	
Ur:							
Urban land	85	Not rated		Not rated		Not rated	
UsB:							
Urban land	50	Not rated		Not rated		Not rated	
Sassafras	30	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
Beltsville	15	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
UsD:							
Urban land	50	Not rated		Not rated		Not rated	
Sassafras	30	Moderate		Severe		Moderately suited	
		Slope	0.50	Slope	0.95	Slope	0.50
		Erodibility	0.50	Erodibility	0.95		
Beltsville	15	Moderate		Severe		Moderately suited	
		Slope	0.50	Slope	0.95	Slope	0.50
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
UtD:							
Urban land	60	Not rated		Not rated		Not rated	
Udorthents	40	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50	Low strength	0.50
UuB:							
Urban land	60	Not rated		Not rated		Not rated	
Udorthents	40	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
UuD:							
Urban land	60	Not rated		Not rated		Not rated	
Udorthents	40	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
UwC:							
Urban land	50	Not rated		Not rated		Not rated	

Table 10b.--Forestland Management (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
UwC:							
Woodstown-----------	25	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
Sassafras-----------	20	Slight		Moderate		Moderately suited	
				Slope	0.50	Slope	0.50
				Erodibility	0.50		
WaA:							
Watchung------------	85	Slight		Slight		Poorly suited	
						Wetness	1.00
						Low strength	0.50
WcB:							
Watchung------------	85	Slight		Moderate		Poorly suited	
				Slope	0.50	Wetness	1.00
				Erodibility	0.50	Low strength	0.50
WgB:							
Wheaton-------------	60	Slight		Slight		Moderately suited	
						Low strength	0.50
Glenelg-------------	40	Slight		Slight		Moderately suited	
						Low strength	0.50
WgD:							
Wheaton-------------	60	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
Glenelg-------------	40	Moderate		Severe		Poorly suited	
		Slope	0.50	Slope	0.95	Slope	1.00
		Erodibility	0.50	Erodibility	0.95	Low strength	0.50
WhA:							
Wiltshire-----------	85	Slight		Slight		Moderately suited	
						Low strength	0.50
WhB:							
Wiltshire-----------	85	Slight		Moderate		Moderately suited	
				Slope	0.50	Low strength	0.50
				Erodibility	0.50		
WoA:							
Woodstown-----------	85	Slight		Slight		Well suited	
WoB:							
Woodstown-----------	85	Slight		Moderate		Well suited	
				Slope	0.50		
				Erodibility	0.50		
ZbA:							
Zekiah--------------	50	Slight		Slight		Poorly suited	
						Flooding	1.00
						Wetness	1.00
						Sandiness	0.50
						Low strength	0.50
Issue---------------	40	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50

Table 10c.--Forestland Management (Part 3)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BaA:							
Baile	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
BeA:							
Benevola	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Stickiness	0.50	Low strength	0.50
		High plasticity index	0.50	High plasticity index	0.50		
BeB:							
Benevola	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Slope	0.50	Low strength	0.50
		High plasticity index	0.50	Stickiness	0.50		
				High plasticity index	0.50		
BeC:							
Benevola	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Slope	0.50	Low strength	0.50
		High plasticity index	0.50	Stickiness	0.50		
				High plasticity index	0.50		
BrC:							
Brinklow	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
BrD:							
Brinklow	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
BtF:							
Brinklow	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Blocktown	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
CeB:							
Chillum	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
CeC:							
Chillum	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
				Slope	0.50		

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
ChB:							
Chillum-------------	55	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
Russett-------------	35	Well suited		Well suited		Well suited	
ChC:							
Chillum-------------	55	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
Russett-------------	35	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Co:							
Codorus-------------	50	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Hatboro-------------	35	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
Cp:							
Codorus, frequently flooded-----------	50	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Hatboro, frequently flooded-----------	35	Well suited		Well suited		Poorly suited	
						Wetness	1.00
						Low strength	0.50
CrD:							
Croom---------------	55	Moderately suited		Moderately suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
Evesboro------------	30	Well suited		Moderately suited		Well suited	
				Slope	0.50		
DhB:							
Downer--------------	50	Well suited		Well suited		Well suited	
Hammonton-----------	30	Well suited		Well suited		Well suited	
DhC:							
Downer--------------	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Hammonton-----------	30	Well suited		Moderately suited		Well suited	
				Slope	0.50		
DhD:							
Downer--------------	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Hammonton-----------	35	Well suited		Moderately suited		Well suited	
				Slope	0.50		

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
DxC:							
Downer	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Phalanx	35	Well suited		Moderately suited		Well suited	
				Slope	0.50		
EaB:							
Elioak	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
EbC:							
Evesboro	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Fa:							
Fallsington, undrained	85	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
GaC:							
Gaila	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
GaD:							
Gaila	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
GbA:							
Gladstone	85	Well suited		Well suited		Well suited	
GbB:							
Gladstone	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
GbC:							
Gladstone	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
GcB:							
Gladstone	55	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Legore	30	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
GcC:							
Gladstone	55	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Legore	30	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
GdC:							
Gladstone-----------	55	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
Legore--------------	30	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
GdD:							
Gladstone-----------	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Legore--------------	30	Poorly suited		Poorly suited		Moderately suited	
		Stickiness	0.75	Slope	0.75	Slope	0.50
		High plasticity index	0.75	Stickiness	0.75		
				High plasticity index	0.75		
				Rock fragments	0.50		
GfB:							
Gladstone-----------	50	Well suited		Well suited		Well suited	
Urban land----------	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone-----------	45	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Urban land----------	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg-------------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
GgB:							
Glenelg-------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
GgC:							
Glenelg-------------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
GhB:							
Glenelg-------------	45	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Urban land----------	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg-------------	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land----------	30	Not rated		Not rated		Not rated	
GmA:							
Glenville-----------	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
GmB:							
Glenville	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
GmC:							
Glenville	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
GnB:							
Glenville	50	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Baile	35	Well suited		Well suited		Moderately suited	
						Low strength	0.50
GoB:							
Glenville	60	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Codorus	35	Well suited		Well suited		Moderately suited	
						Low strength	0.50
GuB:							
Glenville	45	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Urban land	35	Not rated		Not rated		Not rated	
Udorthents	20	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Ha:							
Hatboro	60	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Codorus	35	Well suited		Well suited		Moderately suited	
						Low strength	0.50
JaB:							
Jackland	85	Poorly suited		Poorly suited		Moderately suited	
		Stickiness	0.75	Stickiness	0.75	Low strength	0.50
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
LaB:							
Legore	85	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
LaC:							
Legore	85	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
LeB:							
Legore	85	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
LeC:							
Legore	85	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
LmB:							
Legore	55	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
Montalto	30	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Slope	0.50	Low strength	0.50
		High plasticity index	0.50	Stickiness	0.50		
				High plasticity index	0.50		
				Rock fragments	0.50		
LoB:							
Legore	40	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
Montalto	35	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Stickiness	0.50	Low strength	0.50
		High plasticity index	0.50	High plasticity index	0.50		
				Rock fragments	0.50		
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Poorly suited		Poorly suited		Well suited	
		Stickiness	0.75	Stickiness	0.75		
		High plasticity index	0.75	High plasticity index	0.75		
				Slope	0.50		
				Rock fragments	0.50		
Montalto	30	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Slope	0.50	Low strength	0.50
		High plasticity index	0.50	Stickiness	0.50		
				High plasticity index	0.50		
				Rock fragments	0.50		
Urban land	20	Not rated		Not rated		Not rated	

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
LrD:							
Legore	55	Poorly suited		Poorly suited		Moderately suited	
		Stickiness	0.75	Slope	0.75	Slope	0.50
		High plasticity index	0.75	Stickiness	0.75		
				High plasticity index	0.75		
				Rock fragments	0.50		
Relay	30	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
LrF:							
Legore	55	Poorly suited		Unsuited		Poorly suited	
		Stickiness	0.75	Slope	1.00	Slope	1.00
		High plasticity index	0.75	Stickiness	0.75		
		Slope	0.50	High plasticity index	0.75		
				Rock fragments	0.50		
Relay	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
MaB:							
Manor	85	Well suited		Well suited		Moderately suited	
						Low strength	0.50
MaC:							
Manor	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
MaD:							
Manor	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
McD:							
Manor	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
MgD:							
Manor	55	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
Bannertown	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
MgF:							
Manor	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Bannertown	35	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MkF:							
Manor	55	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
Brinklow	30	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
MoB:							
Mount Lucas	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
MoC:							
Mount Lucas	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
OcB:							
Occoquan	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
OcC:							
Occoquan	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
PfC:							
Patapsco	50	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Slope	0.50	Sandiness	0.50
				Sandiness	0.50		
Fort Mott	40	Well suited		Moderately suited		Well suited	
				Slope	0.50		
RsB:							
Russett	85	Well suited		Well suited		Well suited	
RsC:							
Russett	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
RsD:							
Russett	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
RtB:							
Russett	50	Well suited		Well suited		Well suited	
Alloway	30	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Hambrook	20	Well suited		Well suited		Well suited	
RtC:							
Russett	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Alloway	30	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Hambrook	20	Well suited		Moderately suited		Well suited	
				Slope	0.50		

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
RtD:							
Russett-------------	60	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Alloway-------------	25	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Hambrook------------	15	Well suited		Moderately suited		Well suited	
				Slope	0.50		
RuB:							
Russett-------------	50	Well suited		Well suited		Well suited	
Beltsville----------	35	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
RuC:							
Russett-------------	55	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Beltsville----------	30	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Slope	0.50	Low strength	0.50
				Sandiness	0.50		
SaB:							
Sassafras-----------	85	Well suited		Well suited		Well suited	
SaC:							
Sassafras-----------	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
SfB:							
Sassafras-----------	85	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
SrC:							
Sassafras-----------	55	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Croom---------------	35	Moderately suited		Moderately suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
SrD:							
Sassafras-----------	50	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Croom---------------	35	Moderately suited		Moderately suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.50	Low strength	0.50
				Slope	0.50		
SrE:							
Sassafras-----------	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
Croom---------------	30	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.75	Slope	0.50
UaF:							
Udorthents----------	100	Not rated		Not rated		Not rated	

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
UbF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UcB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum------------	35	Well suited		Moderately suited		Well suited	
				Rock fragments	0.50		
Beltsville----------	15	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
UcD:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum------------	35	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
Beltsville----------	15	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Slope	0.50	Low strength	0.50
				Sandiness	0.50		
UdB:							
Udorthents----------	90	Well suited		Well suited		Moderately suited	
						Low strength	0.50
UfA:							
Urban land----------	50	Not rated		Not rated		Not rated	
Fallsington, undrained----------	30	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Sandiness	0.50	Sandiness	0.50
UoE:							
Udorthents----------	100	Not rated		Not rated		Not rated	
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
UsB:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Well suited		Well suited		Well suited	
Beltsville----------	15	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Beltsville----------	15	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Slope	0.50	Low strength	0.50
				Sandiness	0.50		
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
UtD:							
Udorthents----------	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Well suited		Well suited		Moderately suited	
						Low strength	0.50
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	
Woodstown-----------	25	Well suited		Moderately suited		Well suited	
				Slope	0.50		
Sassafras-----------	20	Well suited		Moderately suited		Well suited	
				Slope	0.50		
WaA:							
Watchung------------	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Stickiness	0.50	Low strength	0.50
		High plasticity index	0.50	High plasticity index	0.50		
WcB:							
Watchung------------	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness	0.50	Rock fragments	0.50	Low strength	0.50
		High plasticity index	0.50	Slope	0.50		
				Stickiness	0.50		
				High plasticity index	0.50		
WgB:							
Wheaton-------------	60	Well suited		Well suited		Moderately suited	
						Low strength	0.50
Glenelg-------------	40	Well suited		Well suited		Moderately suited	
						Low strength	0.50
WgD:							
Wheaton-------------	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
Glenelg-------------	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
WhA:							
Wiltshire-----------	85	Well suited		Moderately suited		Moderately suited	
				Rock fragments	0.50	Low strength	0.50
WhB:							
Wiltshire-----------	85	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		

Table 10c.--Forestland Management (Part 3)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WoA:							
Woodstown-----------	85	Well suited		Well suited		Well suited	
WoB:							
Woodstown-----------	85	Well suited		Well suited		Well suited	
ZbA:							
Zekiah--------------	50	Moderately suited		Poorly suited		Poorly suited	
		Wetness	0.50	Wetness	0.75	Wetness	1.00
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
						Sandiness	0.50
Issue---------------	40	Well suited		Well suited		Moderately suited	
						Low strength	0.50

Table 10d.--Forestland Management (Part 4)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:					
Alloway	85	Well suited		Well suited	
BaA:					
Baile	85	Well suited		Well suited	
BeA:					
Benevola	85	Well suited		Well suited	
BeB:					
Benevola	85	Well suited		Well suited	
BeC:					
Benevola	85	Well suited		Well suited	
BrC:					
Brinklow	85	Well suited		Well suited	
BrD:					
Brinklow	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
BtF:					
Brinklow	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Blocktown	40	Unsuited		Unsuited	
		Slope	1.00	Restrictive layer	1.00
		Rock fragments	0.50	Slope	1.00
CeB:					
Chillum	85	Well suited		Well suited	
CeC:					
Chillum	85	Well suited		Well suited	
ChB:					
Chillum	55	Well suited		Well suited	
Russett	35	Well suited		Well suited	
ChC:					
Chillum	55	Well suited		Well suited	
Russett	35	Well suited		Well suited	
Co:					
Codorus	50	Well suited		Well suited	
Hatboro	35	Well suited		Unsuited	
				Wetness	1.00
Cp:					
Codorus, frequently flooded	50	Well suited		Well suited	

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
Cp:					
Hatboro, frequently flooded	35	Well suited		Unsuited	
				Wetness	1.00
CrD:					
Croom	55	Poorly suited		Well suited	
		Rock fragments	0.50		
Evesboro	30	Well suited		Well suited	
DhB:					
Downer	50	Well suited		Well suited	
Hammonton	30	Well suited		Well suited	
DhC:					
Downer	50	Well suited		Well suited	
Hammonton	30	Well suited		Well suited	
DhD:					
Downer	50	Well suited		Well suited	
Hammonton	35	Well suited		Well suited	
DxC:					
Downer	50	Well suited		Well suited	
Phalanx	35	Well suited		Well suited	
EaB:					
Elioak	85	Well suited		Well suited	
EbC:					
Evesboro	85	Well suited		Well suited	
Fa:					
Fallsington, undrained	85	Well suited		Well suited	
GaC:					
Gaila	85	Well suited		Well suited	
GaD:					
Gaila	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
GbA:					
Gladstone	85	Well suited		Well suited	
GbB:					
Gladstone	85	Well suited		Well suited	
GbC:					
Gladstone	85	Well suited		Well suited	
GcB:					
Gladstone	55	Well suited		Well suited	

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GcB:					
Legore	30	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
GcC:					
Gladstone	55	Well suited		Well suited	
Legore	30	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
GdC:					
Gladstone	55	Well suited		Well suited	
Legore	30	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
GdD:					
Gladstone	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Legore	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness	0.50		
		High plasticity index	0.50		
GfB:					
Gladstone	50	Well suited		Well suited	
Urban land	40	Not rated		Not rated	
GfC:					
Gladstone	45	Well suited		Well suited	
Urban land	40	Not rated		Not rated	
GgA:					
Glenelg	85	Well suited		Well suited	
GgB:					
Glenelg	85	Well suited		Well suited	
GgC:					
Glenelg	85	Well suited		Well suited	
GhB:					
Glenelg	45	Well suited		Well suited	
Urban land	35	Not rated		Not rated	
GhC:					
Glenelg	45	Well suited		Well suited	
Urban land	30	Not rated		Not rated	

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GmA:					
Glenville-----------	85	Well suited		Well suited	
GmB:					
Glenville-----------	85	Well suited		Well suited	
GmC:					
Glenville-----------	85	Well suited		Well suited	
GnB:					
Glenville-----------	50	Well suited		Well suited	
Baile---------------	35	Well suited		Well suited	
GoB:					
Glenville-----------	60	Well suited		Well suited	
Codorus-------------	35	Well suited		Well suited	
GuB:					
Glenville-----------	45	Well suited		Well suited	
Urban land----------	35	Not rated		Not rated	
Udorthents----------	20	Well suited		Well suited	
Ha:					
Hatboro-------------	60	Well suited		Well suited	
Codorus-------------	35	Well suited		Well suited	
JaB:					
Jackland------------	85	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
LaB:					
Legore--------------	85	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
LaC:					
Legore--------------	85	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
LeB:					
Legore--------------	85	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
LeC:					
Legore--------------	85	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
LmB:					
Legore	55	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
Montalto	30	Well suited		Well suited	
LoB:					
Legore	40	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
Montalto	35	Well suited		Well suited	
Urban land	20	Not rated		Not rated	
LoC:					
Legore	40	Poorly suited		Well suited	
		Stickiness	0.50		
		High plasticity index	0.50		
Montalto	30	Well suited		Well suited	
Urban land	20	Not rated		Not rated	
LrD:					
Legore	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Stickiness	0.50		
		High plasticity index	0.50		
Relay	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
LrF:					
Legore	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Stickiness	0.50		
		High plasticity index	0.50		
Relay	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
MaB:					
Manor	85	Well suited		Well suited	
MaC:					
Manor	85	Well suited		Well suited	
MaD:					
Manor	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
McD:					
Manor	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
MgD:					
Manor	55	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Bannertown	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
MgF:					
Manor	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Bannertown	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
MkF:					
Manor	55	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Brinklow	30	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
MoB:					
Mount Lucas	85	Well suited		Well suited	
MoC:					
Mount Lucas	85	Well suited		Well suited	
OcB:					
Occoquan	85	Well suited		Well suited	
OcC:					
Occoquan	85	Well suited		Well suited	
PfC:					
Patapsco	50	Well suited		Well suited	
Fort Mott	40	Well suited		Well suited	
RsB:					
Russett	85	Well suited		Well suited	
RsC:					
Russett	85	Well suited		Well suited	
RsD:					
Russett	85	Well suited		Well suited	
RtB:					
Russett	50	Well suited		Well suited	
Alloway	30	Well suited		Well suited	
Hambrook	20	Well suited		Well suited	
RtC:					
Russett	50	Well suited		Well suited	
Alloway	30	Well suited		Well suited	
Hambrook	20	Well suited		Well suited	

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
RtD:					
Russett------------	60	Well suited		Well suited	
Alloway------------	25	Well suited		Well suited	
Hambrook-----------	15	Well suited		Well suited	
RuB:					
Russett------------	50	Well suited		Well suited	
Beltsville---------	35	Well suited		Well suited	
RuC:					
Russett------------	55	Well suited		Well suited	
Beltsville---------	30	Well suited		Well suited	
SaB:					
Sassafras----------	85	Well suited		Well suited	
SaC:					
Sassafras----------	85	Well suited		Well suited	
SfB:					
Sassafras----------	85	Well suited		Well suited	
SrC:					
Sassafras----------	55	Well suited		Well suited	
Croom--------------	35	Poorly suited		Well suited	
		Rock fragments	0.50		
SrD:					
Sassafras----------	50	Well suited		Well suited	
Croom--------------	35	Poorly suited		Well suited	
		Rock fragments	0.50		
SrE:					
Sassafras----------	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Croom--------------	30	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
UaF:					
Udorthents---------	100	Not rated		Not rated	
UbF:					
Udorthents---------	100	Not rated		Not rated	
UcB:					
Urban land---------	45	Not rated		Not rated	
Chillum------------	35	Well suited		Well suited	
Beltsville---------	15	Well suited		Well suited	

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
UcD:					
Urban land	45	Not rated		Not rated	
Chillum	35	Well suited		Well suited	
Beltsville	15	Well suited		Well suited	
UdB:					
Udorthents	90	Well suited		Well suited	
UfA:					
Urban land	50	Not rated		Not rated	
Fallsington, undrained	30	Well suited		Well suited	
Udorthents	20	Well suited		Well suited	
UoE:					
Udorthents	100	Not rated		Not rated	
Ur:					
Urban land	85	Not rated		Not rated	
UsB:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Well suited		Well suited	
Beltsville	15	Well suited		Well suited	
UsD:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Well suited		Well suited	
Beltsville	15	Well suited		Well suited	
UtD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Well suited		Well suited	
UuB:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Well suited		Well suited	
UuD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
UwC:					
Urban land	50	Not rated		Not rated	
Woodstown	25	Well suited		Well suited	
Sassafras	20	Well suited		Well suited	

Table 10d.--Forestland Management (Part 4)--Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WaA:					
Watchung	85	Well suited		Well suited	
WcB:					
Watchung	85	Well suited		Well suited	
WgB:					
Wheaton	60	Well suited		Well suited	
Glenelg	40	Well suited		Well suited	
WgD:					
Wheaton	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Glenelg	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
WhA:					
Wiltshire	85	Well suited		Well suited	
WhB:					
Wiltshire	85	Well suited		Well suited	
WoA:					
Woodstown	85	Well suited		Well suited	
WoB:					
Woodstown	85	Well suited		Well suited	
ZbA:					
Zekiah	50	Poorly suited		Unsuited	
		Wetness	0.50	Wetness	1.00
Issue	40	Well suited		Well suited	

Table 11a.--Recreation (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.50
						Depth to saturated zone	0.39
BaA:							
Baile	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
BeA:							
Benevola	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
BeB:							
Benevola	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.21	Slow water movement	0.21	Slope	0.88
						Slow water movement	0.21
BeC:							
Benevola	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Slow water movement	0.21	Slow water movement	0.21	Slow water movement	0.21
BrC:							
Brinklow	85	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Slope	0.63	Slope	0.63	Slope	1.00
						Depth to bedrock	0.46
BrD:							
Brinklow	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slow water movement	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
						Depth to bedrock	0.46
BtF:							
Brinklow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slow water movement	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
						Depth to bedrock	0.46
Blocktown	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
CeB:							
Chillum	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Gravel content	0.22
CeC:							
Chillum	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
						Gravel content	0.22
ChB:							
Chillum	55	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Gravel content	0.22
Russett	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	0.50
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.50
						Depth to saturated zone	0.39
ChC:							
Chillum	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
						Gravel content	0.22
Russett	35	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.50
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Co:							
Codorus	50	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Gravel content	0.22
Hatboro	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Cp:							
Codorus, frequently flooded	50	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Hatboro, frequently flooded	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
CrD:							
Croom	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
CrD:							
Evesboro------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Too sandy	0.68	Too sandy	0.68	Too sandy	0.68
DhB:							
Downer--------------	50	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Hammonton-----------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.50
		Too sandy	0.08	Too sandy	0.08	Depth to saturated zone	0.39
						Too sandy	0.08
DhC:							
Downer--------------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Hammonton-----------	30	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
DhD:							
Downer--------------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
Hammonton-----------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
		Too sandy	0.01	Too sandy	0.01	Too sandy	0.01
DxC:							
Downer--------------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Phalanx-------------	35	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.01	Too sandy	0.01	Slope	1.00
		Slope	0.01	Slope	0.01	Too sandy	0.01
EaB:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.94	Slow water movement	0.94	Slope	1.00
						Slow water movement	0.94
EbC:							
Evesboro------------	85	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.68	Too sandy	0.68	Slope	1.00
		Slope	0.01	Slope	0.01	Too sandy	0.68
Fa:							
Fallsington, undrained----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
GaC:							
Gaila---------------	85	Very limited		Very limited		Very limited	
		Gravel content	0.99	Gravel content	0.99	Slope	1.00
		Slope	0.63	Slope	0.63	Gravel content	1.00

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
GaD:							
Gaila	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.99	Gravel content	0.99	Gravel content	1.00
GbA:							
Gladstone	85	Not limited		Not limited		Somewhat limited	
						Gravel content	0.22
GbB:							
Gladstone	85	Not limited		Not limited		Somewhat limited	
						Slope	0.88
						Gravel content	0.22
GbC:							
Gladstone	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.22
GcB:							
Gladstone	55	Not limited		Not limited		Very limited	
						Slope	1.00
						Gravel content	0.22
Legore	30	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
						Slow water movement	0.96
GcC:							
Gladstone	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.22
Legore	30	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.63	Slope	0.63	Slow water movement	0.96
GdC:							
Gladstone	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Gravel content	0.22
						Large stones content	0.01
Legore	30	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.63	Slope	0.63	Slow water movement	0.96
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
GdD:							
Gladstone	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Gravel content	0.22
						Large stones content	0.01

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
GdD:							
Legore	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
GfB:							
Gladstone	50	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Gravel content	0.22
Urban land	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.22
Urban land	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg	85	Not limited		Not limited		Not limited	
GgB:							
Glenelg	85	Not limited		Not limited		Very limited	
						Slope	1.00
GgC:							
Glenelg	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
GhB:							
Glenelg	45	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Urban land	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Urban land	30	Not rated		Not rated		Not rated	
GmA:							
Glenville	85	Somewhat limited		Somewhat limited		Not limited	
		Depth to cemented pan	0.46	Depth to cemented pan	0.46		
GmB:							
Glenville	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Slope	1.00
						Depth to cemented pan	0.46
GmC:							
Glenville	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Depth to cemented pan	0.46

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
GnB:							
Glenville-----------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Slope	0.50
						Depth to cemented pan	0.46
Baile---------------	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.50
GoB:							
Glenville-----------	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Slope	0.50
						Depth to cemented pan	0.46
Codorus-------------	35	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Flooding	0.60
		Depth to saturated zone	0.39			Depth to saturated zone	0.39
						Gravel content	0.22
GuB:							
Glenville-----------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.46	Depth to cemented pan	0.46	Slope	0.50
						Depth to cemented pan	0.46
Urban land----------	35	Not rated		Not rated		Not rated	
Udorthents----------	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.50
Ha:							
Hatboro-------------	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00			Flooding	0.60
Codorus-------------	35	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.19	Flooding	0.60
		Depth to saturated zone	1.00			Depth to saturated zone	0.39
						Gravel content	0.22
JaB:							
Jackland------------	85	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Slope	1.00
						Depth to saturated zone	0.98

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
LaB:							
Legore	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
						Slow water movement	0.96
LaC:							
Legore	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.37	Slope	0.37	Slow water movement	0.96
LeB:							
Legore	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Slow water movement	0.96
						Large stones content	0.01
LeC:							
Legore	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.63	Slope	0.63	Slow water movement	0.96
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
LmB:							
Legore	55	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
						Slow water movement	0.96
Montalto	30	Not limited		Not limited		Very limited	
						Slope	1.00
LoB:							
Legore	40	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
						Slow water movement	0.96
Montalto	35	Not limited		Not limited		Somewhat limited	
						Slope	0.50
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.63	Slope	0.63	Slow water movement	0.96
Montalto	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Urban land	20	Not rated		Not rated		Not rated	

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
LrD:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.99	Gravel content	0.99	Gravel content	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
LrF:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.99	Gravel content	0.99	Gravel content	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Large stones content	0.76	Large stones content	0.76	Large stones content	0.76
MaB:							
Manor	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
MaC:							
Manor	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
MaD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
McD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
MgD:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.50	Large stones content	0.50	Large stones content	0.50
						Depth to bedrock	0.46
						Gravel content	0.13

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
MgF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
						Gravel content	0.13
MkF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
Brinklow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slow water movement	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slope	1.00
						Depth to bedrock	0.46
MoB:							
Mount Lucas	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Slope	1.00
		Slow water movement	0.43	Slow water movement	0.43	Depth to saturated zone	0.81
		Large stones content	0.01	Large stones content	0.01	Slow water movement	0.43
						Large stones content	0.01
MoC:							
Mount Lucas	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.81	Slope	0.63	Slope	1.00
		Slope	0.63	Depth to saturated zone	0.48	Depth to saturated zone	0.81
		Slow water movement	0.43	Slow water movement	0.43	Slow water movement	0.43
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
OcB:							
Occoquan	85	Not limited		Not limited		Very limited	
						Slope	1.00
						Gravel content	0.22
OcC:							
Occoquan	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Gravel content	0.22
PfC:							
Patapsco	50	Very limited		Very limited		Very limited	
		Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
		Slope	0.01	Slope	0.01	Slope	1.00
Fort Mott	40	Somewhat limited		Somewhat limited		Very limited	
		Too sandy	0.50	Too sandy	0.50	Slope	1.00
		Slope	0.01	Slope	0.01	Too sandy	0.50

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
RsB:							
Russett-------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
RsC:							
Russett-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.50
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
RsD:							
Russett-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
RtB:							
Russett-------------	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
Alloway-------------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
Hambrook------------	20	Not limited		Not limited		Somewhat limited	
						Slope	0.12
RtC:							
Russett-------------	50	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.50
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Alloway-------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.96
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Hambrook------------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
RtD:							
Russett	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Alloway	25	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.96	Slow water movement	0.96	Slope	1.00
		Slope	0.63	Slope	0.63	Slow water movement	0.96
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
Hambrook	15	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
RuB:							
Russett	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
Beltsville	35	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
RuC:							
Russett	55	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slow water movement	0.50
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Beltsville	30	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to cemented pan	0.95
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
SaB:							
Sassafras	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
SaC:							
Sassafras	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
SfB:							
Sassafras	85	Very limited		Very limited		Very limited	
		Gravel content	0.99	Gravel content	0.99	Gravel content	1.00
						Slope	0.12

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
SrC:							
Sassafras-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Croom---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.15	Slow water movement	0.15	Slope	1.00
		Slope	0.01	Slope	0.01	Slow water movement	0.15
SrD:							
Sassafras-----------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
Croom---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
		Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
SrE:							
Sassafras-----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Croom---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.15	Slow water movement	0.15	Slow water movement	0.15
UaF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UcB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum-------------	35	Not limited		Not limited		Somewhat limited	
						Gravel content	0.22
						Slope	0.12
Beltsville----------	15	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
UcD:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum-------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
						Gravel content	0.22
Beltsville----------	15	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to cemented pan	0.95
		Slope	0.16	Slope	0.16	Depth to saturated zone	0.39

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
UdB:							
Udorthents----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slow water movement	0.50	Slow water movement	0.50
						Slope	0.12
UfA:							
Urban land----------	50	Not rated		Not rated		Not rated	
Fallsington, undrained----------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
UoE:							
Udorthents----------	100	Not rated		Not rated		Not rated	
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
UsB:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Not limited		Not limited		Somewhat limited	
						Slope	0.12
Beltsville----------	15	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Depth to cemented pan	0.95
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Beltsville----------	15	Very limited		Very limited		Very limited	
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
		Depth to cemented pan	0.95	Depth to cemented pan	0.95	Slope	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to cemented pan	0.95
		Slope	0.16	Slope	0.16	Depth to saturated zone	0.39
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Somewhat limited		Very limited	
		Slow water movement	0.50	Slow water movement	0.50	Slope	1.00
		Slope	0.01	Slope	0.01	Slow water movement	0.50
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
UuB:							
Udorthents----------	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
						Slope	0.50
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Slow water movement	0.96	Slow water movement	0.96	Slow water movement	0.96
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	
Woodstown-----------	25	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Sassafras-----------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
WaA:							
Watchung------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.24	Slow water movement	0.24	Slow water movement	0.24
WcB:							
Watchung------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones content	0.53	Large stones content	0.53	Slope	0.88
		Slow water movement	0.24	Slow water movement	0.24	Large stones content	0.53
						Slow water movement	0.24
WgB:							
Wheaton-------------	60	Not limited		Not limited		Somewhat limited	
						Slope	0.50
						Gravel content	0.04
Glenelg-------------	40	Not limited		Not limited		Somewhat limited	
						Slope	0.50
WgD:							
Wheaton-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.04
Glenelg-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 11a.--Recreation (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
WhA:							
Wiltshire-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.54	Depth to cemented pan	0.54	Depth to saturated zone	0.07
		Depth to saturated zone	0.07	Depth to saturated zone	0.03		
WhB:							
Wiltshire-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to cemented pan	0.54	Depth to cemented pan	0.54	Slope	0.88
		Depth to saturated zone	0.07	Depth to saturated zone	0.03	Depth to cemented pan	0.54
						Depth to saturated zone	0.07
WoA:							
Woodstown-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
WoB:							
Woodstown-----------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
						Slope	0.12
ZbA:							
Zekiah--------------	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00
Issue---------------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	0.40	Flooding	1.00

Table 11b.--Recreation (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway-------------	85	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
BaA:							
Baile---------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
BeA:							
Benevola------------	85	Not limited		Not limited		Not limited	
BeB:							
Benevola------------	85	Not limited		Not limited		Not limited	
BeC:							
Benevola------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
BrC:							
Brinklow------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
						Depth to bedrock	0.46
BrD:							
Brinklow------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Depth to bedrock	0.46
BtF:							
Brinklow------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
Blocktown-----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Droughty	0.09
CeB:							
Chillum-------------	85	Not limited		Not limited		Not limited	
CeC:							
Chillum-------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.01
ChB:							
Chillum-------------	55	Not limited		Not limited		Not limited	
Russett-------------	35	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
ChC:							
Chillum	55	Not limited		Not limited		Somewhat limited	
						Slope	0.01
Russett	35	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
Co:							
Codorus	50	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Depth to saturated zone	0.19
Hatboro	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Cp:							
Codorus, frequently flooded	50	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Depth to saturated zone	0.19
Hatboro, frequently flooded	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
CrD:							
Croom	55	Not limited		Not limited		Somewhat limited	
						Slope	0.84
						Droughty	0.51
Evesboro	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.68	Too sandy	0.68	Slope	0.84
						Droughty	0.60
DhB:							
Downer	50	Not limited		Not limited		Not limited	
Hammonton	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.08	Too sandy	0.08	Depth to saturated zone	0.19
DhC:							
Downer	50	Not limited		Not limited		Somewhat limited	
						Slope	0.01
Hammonton	30	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
DhD:							
Downer	50	Not limited		Not limited		Somewhat limited	
						Slope	0.84

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
DhD:							
Hammonton-----------	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.01	Too sandy	0.01	Slope	0.84
						Depth to saturated zone	0.19
DxC:							
Downer--------------	50	Not limited		Not limited		Somewhat limited	
						Slope	0.01
Phalanx-------------	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.01	Too sandy	0.01	Droughty	0.86
						Slope	0.01
EaB:							
Elioak--------------	85	Not limited		Not limited		Somewhat limited	
						Large stones content	0.01
EbC:							
Evesboro------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.68	Too sandy	0.68	Droughty	0.60
						Slope	0.01
Fa:							
Fallsington, undrained----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
GaC:							
Gaila---------------	85	Not limited		Not limited		Very limited	
						Gravel content	0.99
						Slope	0.63
GaD:							
Gaila---------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.99
GbA:							
Gladstone-----------	85	Not limited		Not limited		Not limited	
GbB:							
Gladstone-----------	85	Not limited		Not limited		Not limited	
GbC:							
Gladstone-----------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
GcB:							
Gladstone-----------	55	Not limited		Not limited		Not limited	
Legore--------------	30	Not limited		Not limited		Not limited	
GcC:							
Gladstone-----------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Legore--------------	30	Not limited		Not limited		Somewhat limited	
						Slope	0.63

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
GdC:							
Gladstone-----------	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.01	Large stones content	0.01	Slope	0.63
Legore--------------	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.01	Large stones content	0.01	Slope	0.63
GdD:							
Gladstone-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.01	Slope	1.00
		Large stones content	0.01				
Legore--------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.01	Slope	1.00
		Large stones content	0.01				
GfB:							
Gladstone-----------	50	Not limited		Not limited		Not limited	
Urban land----------	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone-----------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Urban land----------	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg-------------	85	Not limited		Not limited		Not limited	
GgB:							
Glenelg-------------	85	Not limited		Not limited		Not limited	
GgC:							
Glenelg-------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
GhB:							
Glenelg-------------	45	Not limited		Not limited		Not limited	
Urban land----------	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg-------------	45	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Urban land----------	30	Not rated		Not rated		Somewhat limited	
						Slope	0.63
GmA:							
Glenville-----------	85	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.46
GmB:							
Glenville-----------	85	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.46

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
GmC:							
Glenville-----------	85	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
						Depth to cemented pan	0.46
GnB:							
Glenville-----------	50	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.46
Baile---------------	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
GoB:							
Glenville-----------	60	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.46
Codorus-------------	35	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
						Depth to saturated zone	0.19
GuB:							
Glenville-----------	45	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.46
Urban land----------	35	Not rated		Not rated		Not rated	
Udorthents----------	20	Not limited		Not limited		Not limited	
Ha:							
Hatboro-------------	60	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
						Flooding	0.60
Codorus-------------	35	Not limited		Not limited		Somewhat limited	
						Flooding	0.60
						Depth to saturated zone	0.19
JaB:							
Jackland------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.44	Depth to saturated zone	0.44	Depth to saturated zone	0.75
LaB:							
Legore--------------	85	Not limited		Not limited		Not limited	
LaC:							
Legore--------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
LeB:							
Legore	85	Somewhat limited		Somewhat limited		Not limited	
		Large stones content	0.01	Large stones content	0.01		
LeC:							
Legore	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.01	Large stones content	0.01	Slope	0.63
LmB:							
Legore	55	Not limited		Not limited		Not limited	
Montalto	30	Not limited		Not limited		Not limited	
LoB:							
Legore	40	Not limited		Not limited		Not limited	
Montalto	35	Not limited		Not limited		Not limited	
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Montalto	30	Not limited		Not limited		Somewhat limited	
						Slope	0.63
Urban land	20	Not rated		Not rated		Not rated	
LrD:							
Legore	55	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
		Slope	0.50				
Relay	30	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.76	Large stones content	0.76	Slope	1.00
						Gravel content	0.99
		Slope	0.50				
LrF:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76		
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.76	Large stones content	0.76	Gravel content	0.99
MaB:							
Manor	85	Not limited		Not limited		Not limited	
MaC:							
Manor	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
MaD:							
Manor---------------	85	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
McD:							
Manor---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.53	Large stones content	0.53	Slope	1.00
		Slope	0.50				
MgD:							
Manor---------------	55	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.53	Large stones content	0.53	Slope	1.00
		Slope	0.50				
Bannertown----------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.50	Large stones content	0.50	Slope	1.00
		Large stones content	0.50			Depth to bedrock	0.46
						Droughty	0.18
						Large stones content	0.03
MgF:							
Manor---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53		
Bannertown----------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
						Droughty	0.18
						Large stones content	0.03
MkF:							
Manor---------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53		
Brinklow------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.46
MoB:							
Mount Lucas---------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
		Large stones content	0.01	Large stones content	0.01		
MoC:							
Mount Lucas---------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Slope	0.63
		Large stones content	0.01	Large stones content	0.01	Depth to saturated zone	0.48
OcB:							
Occoquan------------	85	Not limited		Not limited		Not limited	

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
OcC:							
Occoquan	85	Not limited		Not limited		Somewhat limited	
						Slope	0.63
PfC:							
Patapsco	50	Very limited		Very limited		Somewhat limited	
		Too sandy	1.00	Too sandy	1.00	Droughty	0.98
						Too sandy	0.50
						Slope	0.01
Fort Mott	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Too sandy	0.50	Too sandy	0.50	Droughty	0.01
						Slope	0.01
RsB:							
Russett	85	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
RsC:							
Russett	85	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
RsD:							
Russett	85	Not limited		Not limited		Somewhat limited	
						Slope	0.84
						Depth to saturated zone	0.19
RtB:							
Russett	50	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
Alloway	30	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
Hambrook	20	Not limited		Not limited		Not limited	
RtC:							
Russett	50	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
Alloway	30	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
Hambrook	20	Not limited		Not limited		Somewhat limited	
						Slope	0.01
RtD:							
Russett	60	Not limited		Not limited		Somewhat limited	
						Slope	0.84
						Depth to saturated zone	0.19

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
RtD:							
Alloway-------------	25	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.63
						Depth to saturated zone	0.19
Hambrook------------	15	Not limited		Not limited		Somewhat limited	
						Slope	0.63
RuB:							
Russett-------------	50	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
Beltsville----------	35	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.95
						Depth to saturated zone	0.19
RuC:							
Russett-------------	55	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
Beltsville----------	30	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.95
						Depth to saturated zone	0.19
						Slope	0.01
SaB:							
Sassafras-----------	85	Not limited		Not limited		Not limited	
SaC:							
Sassafras-----------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.01
SfB:							
Sassafras-----------	85	Not limited		Not limited		Very limited	
						Gravel content	0.99
SrC:							
Sassafras-----------	55	Not limited		Not limited		Somewhat limited	
						Slope	0.01
Croom---------------	35	Not limited		Not limited		Somewhat limited	
						Droughty	0.51
						Slope	0.01
SrD:							
Sassafras-----------	50	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.84
Croom---------------	35	Not limited		Not limited		Somewhat limited	
						Slope	0.84
						Droughty	0.51
SrE:							
Sassafras-----------	60	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
SrE:							
Croom	30	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Droughty	0.51
UaF:							
Udorthents	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents	100	Not rated		Not rated		Not rated	
UcB:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Not limited		Not limited		Not limited	
Beltsville	15	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.95
						Depth to saturated zone	0.19
UcD:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.16
Beltsville	15	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to cemented pan	0.95
						Depth to saturated zone	0.19
						Slope	0.16
UdB:							
Udorthents	90	Not limited		Not limited		Not limited	
UfA:							
Urban land	50	Not rated		Not rated		Not rated	
Fallsington, undrained	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
UoE:							
Udorthents	100	Not rated		Not rated		Not rated	
Ur:							
Urban land	85	Not rated		Not rated		Not rated	
UsB:							
Urban land	50	Not rated		Not rated		Not rated	
Sassafras	30	Not limited		Not limited		Not limited	

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
UsB:							
Beltsville----------	15	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.95
						Depth to saturated zone	0.19
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.16
Beltsville----------	15	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Depth to cemented pan	0.95
						Depth to saturated zone	0.19
						Slope	0.16
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Not limited		Not limited		Somewhat limited	
						Slope	0.01
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Not limited		Not limited		Not limited	
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	
Woodstown-----------	25	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
						Slope	0.01
Sassafras-----------	20	Not limited		Not limited		Somewhat limited	
						Slope	0.01
WaA:							
Watchung------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
WcB:							
Watchung------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Large stones content	0.53	Large stones content	0.53		

Table 11b.--Recreation (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
WgB:							
Wheaton	60	Not limited		Not limited		Not limited	
Glenelg	40	Not limited		Not limited		Not limited	
WgD:							
Wheaton	60	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
Glenelg	40	Somewhat limited		Not limited		Very limited	
		Slope	0.02			Slope	1.00
WhA:							
Wiltshire	85	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.54
						Depth to saturated zone	0.03
WhB:							
Wiltshire	85	Not limited		Not limited		Somewhat limited	
						Depth to cemented pan	0.54
						Depth to saturated zone	0.03
WoA:							
Woodstown	85	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
Fallsington, undrained	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
WoB:							
Woodstown	85	Not limited		Not limited		Somewhat limited	
						Depth to saturated zone	0.19
ZbA:							
Zekiah	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
Issue	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00

Table 12.--Hydric Soils

(This table lists only those map unit components that are rated as hydric.)

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria*
BaA----------------------------- Baile silt loam, 0 to 3 percent slope	Baile	85	Depressions, drainageways, swales	2B3
Co------------------------------ Codorus and Hatboro silt loams, 0 to 3 percent slopes	Hatboro	35	Flood plains	2B3
Cp------------------------------ Codorus and Hatboro soils, 0 to 2 percent slopes, frequently flooded	Hatboro, frequently flooded	35	Flood plains	2B3
Fa------------------------------ Fallsington sandy loam, 0 to 2 percent slopes	Fallsington, undrained	85	Flats	2B3
GmA----------------------------- Glenville silt loam, 0 to 3 percent slopes	Baile	10	Depressions, drainageways, swales	2B3
GmB----------------------------- Glenville silt loam, 3 to 8 percent slopes	Baile	5	Depressions, drainageways, swales	2B3
GnB----------------------------- Glenville-Baile silt loams, 0 to 8 percent slopes	Baile	35	Depressions, drainageways, swales	2B3
Ha------------------------------ Hatboro-Codorus silt loams, 0 to 3 percent slopes	Hatboro	60	Flood plains	2B3
MoB----------------------------- Mount Lucas silt loam, 3 to 8 percent slopes, stony	Watchung	10	Depressions, drainageways, swales	2B3
UfA----------------------------- Urban land-Fallsington complex, 0 to 2 percent slopes	Fallsington, undrained	30	Flats	2B3
WaA----------------------------- Watchung silt loam, 0 to 3 percent slopes	Watchung	85	Depressions, drainageways, swales	2B3
WcB----------------------------- Watchung silt loam, 3 to 8 percent slopes, stony	Watchung	85	Depressions, drainageways, swales	2B3
WhA----------------------------- Wiltshire silt loam, 0 to 3 percent slopes	Baile	5	Depressions, drainageways, swales	2B3
WoA----------------------------- Woodstown sandy loam, 0 to 2 percent slopes	Fallsington, undrained	10	Flats	2B3
WoB----------------------------- Woodstown sandy loam, 2 to 5 percent slopes	Fallsington, undrained	5	Flats	2B3

Table 12.--Hydric Soils--Continued

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric criteria*
ZbA------------------------------ Zekiah and Issue soils, 0 to 2 percent slopes, frequently flooded	Zekiah	50	Flood plains	2B3
	Fallsington, undrained	10	Flats	2B3

* Explanation of hydric criteria codes:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

Table 13a.--Building Site Development (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
AwB:							
Alloway	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
		Shrink-swell	0.18			Shrink-swell	0.18
BaA:							
Baile	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
BeA:							
Benevola	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BeB:							
Benevola	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
BeC:							
Benevola	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
BrC:							
Brinklow	85	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	0.63	Shrink-swell	0.50
		Depth to hard bedrock	0.02	Shrink-swell	0.50	Depth to hard bedrock	0.02
				Depth to soft bedrock	0.46		
BrD:							
Brinklow	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.02	Shrink-swell	0.50	Depth to hard bedrock	0.02
				Depth to soft bedrock	0.46		
BtF:							
Brinklow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Depth to hard bedrock	1.00	Shrink-swell	0.50
		Depth to hard bedrock	0.02	Shrink-swell	0.50	Depth to hard bedrock	0.02
				Depth to soft bedrock	0.46		
Blocktown	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.99	Depth to hard bedrock	1.00	Depth to soft bedrock	1.00
		Depth to soft bedrock	0.50	Depth to soft bedrock	1.00	Depth to hard bedrock	0.99

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
CeB:							
Chillum-------------	85	Not limited		Not limited		Not limited	
CeC:							
Chillum-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
ChB:							
Chillum-------------	55	Not limited		Not limited		Not limited	
Russett-------------	35	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
ChC:							
Chillum-------------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Russett-------------	35	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Co:							
Codorus-------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Hatboro-------------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Cp:							
Codorus, frequently flooded------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Hatboro, frequently flooded------------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
CrD:							
Croom---------------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
Evesboro------------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
DhB:							
Downer--------------	50	Not limited		Not limited		Not limited	
Hammonton-----------	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
DhC:							
Downer	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Hammonton	30	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
DhD:							
Downer	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
Hammonton	35	Somewhat limited		Very limited		Very limited	
		Slope	0.84	Depth to	1.00	Slope	1.00
		Depth to	0.39	saturated zone	0.84	Depth to	0.39
		saturated zone		Slope	0.84	saturated zone	
DxC:							
Downer	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Phalanx	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
EaB:							
Elioak	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
EbC:							
Evesboro	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Fa:							
Fallsington, undrained	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
GaC:							
Gaila	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
GaD:							
Gaila	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
GbA:							
Gladstone	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
GbB:							
Gladstone	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
						Slope	0.12
GbC:							
Gladstone	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
GcB:							
Gladstone-----------	55	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Slope	0.50
						Shrink-swell	0.50
Legore--------------	30	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.94			Shrink-swell	0.94
						Slope	0.50
GcC:							
Gladstone-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Legore--------------	30	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.94	Slope	0.63	Slope	1.00
		Slope	0.63			Shrink-swell	0.94
GdC:							
Gladstone-----------	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Legore--------------	30	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.94	Slope	0.63	Slope	1.00
		Slope	0.63			Shrink-swell	0.94
GdD:							
Gladstone-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Legore--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.94			Shrink-swell	0.94
GfB:							
Gladstone-----------	50	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.50			Shrink-swell	0.50
Urban land----------	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone-----------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Urban land----------	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg-------------	85	Not limited		Not limited		Not limited	
GgB:							
Glenelg-------------	85	Not limited		Not limited		Somewhat limited	
						Slope	0.50
GgC:							
Glenelg-------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
GhB:							
Glenelg-------------	45	Not limited		Not limited		Not limited	

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
GhB:							
Urban land----------	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg-------------	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
Urban land----------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
GmA:							
Glenville-----------	85	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
GmB:							
Glenville-----------	85	Not limited		Very limited		Somewhat limited	
				Depth to saturated zone	0.99	Slope	0.50
GmC:							
Glenville-----------	85	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to saturated zone	0.99	Slope	1.00
				Slope	0.63		
GnB:							
Glenville-----------	50	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
Baile---------------	35	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
GoB:							
Glenville-----------	60	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
Codorus-------------	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
GuB:							
Glenville-----------	45	Not limited		Very limited		Not limited	
				Depth to saturated zone	0.99		
Urban land----------	35	Not rated		Not rated		Not rated	
Udorthents----------	20	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to saturated zone	0.16		

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ha:							
Hatboro	60	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Codorus	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
JaB:							
Jackland	85	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98	Shrink-swell	1.00	Depth to saturated zone	0.98
						Slope	0.50
LaB:							
Legore	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.94			Shrink-swell	0.94
						Slope	0.50
LaC:							
Legore	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.94	Slope	0.37	Slope	1.00
		Slope	0.37			Shrink-swell	0.94
LeB:							
Legore	85	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.94			Shrink-swell	0.94
						Slope	0.50
LeC:							
Legore	85	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.94	Slope	0.63	Slope	1.00
		Slope	0.63			Shrink-swell	0.94
LmB:							
Legore	55	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.94			Shrink-swell	0.94
						Slope	0.50
Montalto	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
						Slope	0.50
LoB:							
Legore	40	Somewhat limited		Not limited		Somewhat limited	
		Shrink-swell	0.94			Shrink-swell	0.94
						Slope	0.50
Montalto	35	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.94	Slope	0.63	Slope	1.00
		Slope	0.63			Shrink-swell	0.94

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
LoC:							
Montalto	30	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Slope	1.00
		Slope	0.63	Slope	0.63	Shrink-swell	1.00
Urban land	20	Not rated		Not rated		Not rated	
LrD:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.94			Shrink-swell	0.94
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
LrF:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.94			Shrink-swell	0.94
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
MaB:							
Manor	85	Not limited		Not limited		Not limited	
MaC:							
Manor	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
MaD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
McD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
MgD:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
				Depth to soft bedrock	0.15		
MgF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.46	Depth to hard bedrock	1.00	Depth to hard bedrock	0.46
				Depth to soft bedrock	0.15		

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
MkF:							
Manor	55	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope	 1.00
Brinklow	30	Very limited Slope Shrink-swell Depth to hard bedrock	 1.00 0.50 0.02	Very limited Slope Depth to hard bedrock Shrink-swell Depth to soft bedrock	 1.00 1.00 0.50 0.46	Very limited Slope Shrink-swell Depth to hard bedrock	 1.00 0.50 0.02
MoB:							
Mount Lucas	85	Somewhat limited Depth to saturated zone	 0.81	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone Slope	 0.81 0.50
MoC:							
Mount Lucas	85	Somewhat limited Depth to saturated zone Slope	 0.81 0.63	Very limited Depth to saturated zone Slope	 1.00 0.63	Very limited Slope Depth to saturated zone	 1.00 0.81
OcB:							
Occoquan	85	Not limited		Not limited		Somewhat limited Slope	 0.50
OcC:							
Occoquan	85	Somewhat limited Slope	 0.63	Somewhat limited Slope	 0.63	Very limited Slope	 1.00
PfC:							
Patapsco	50	Somewhat limited Slope	 0.01	Somewhat limited Depth to saturated zone Slope	 0.73 0.01	Very limited Slope	 1.00
Fort Mott	40	Somewhat limited Slope	 0.01	Somewhat limited Slope	 0.01	Very limited Slope	 1.00
RsB:							
Russett	85	Somewhat limited Depth to saturated zone	 0.39	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone	 0.39
RsC:							
Russett	85	Somewhat limited Depth to saturated zone Slope	 0.39 0.01	Very limited Depth to saturated zone Slope	 1.00 0.01	Very limited Slope Depth to saturated zone	 1.00 0.39
RsD:							
Russett	85	Somewhat limited Slope Depth to saturated zone	 0.84 0.39	Very limited Depth to saturated zone Slope	 1.00 0.84	Very limited Slope Depth to saturated zone	 1.00 0.39
RtB:							
Russett	50	Somewhat limited Depth to saturated zone	 0.39	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone	 0.39

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
RtB:							
Alloway-------------	30	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
		Shrink-swell	0.18			Shrink-swell	0.18
Hambrook------------	20	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.73		
RtC:							
Russett-------------	50	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Alloway-------------	30	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.18	Slope	0.01	Depth to saturated zone	0.39
		Slope	0.01			Shrink-swell	0.18
Hambrook------------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Depth to saturated zone	0.73	Slope	1.00
				Slope	0.01		
RtD:							
Russett-------------	60	Somewhat limited		Very limited		Very limited	
		Slope	0.84	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.39	Slope	0.84	Depth to saturated zone	0.39
Alloway-------------	25	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to saturated zone	1.00	Slope	1.00
		Depth to saturated zone	0.39	Slope	0.63	Depth to saturated zone	0.39
		Shrink-swell	0.18			Shrink-swell	0.18
Hambrook------------	15	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Depth to saturated zone	0.73	Slope	1.00
				Slope	0.63		
RuB:							
Russett-------------	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
Beltsville----------	35	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
RuC:							
Russett-------------	55	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Beltsville----------	30	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
SaB:							
Sassafras	85	Not limited		Not limited		Not limited	
SaC:							
Sassafras	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
SfB:							
Sassafras	85	Not limited		Not limited		Not limited	
SrC:							
Sassafras	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Croom	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
SrD:							
Sassafras	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
Croom	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Slope	1.00
SrE:							
Sassafras	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Croom	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
UaF:							
Udorthents	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents	100	Not rated		Not rated		Not rated	
UcB:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Not limited		Not limited		Not limited	
Beltsville	15	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
UcD:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Beltsville	15	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.16	Slope	0.16	Depth to saturated zone	0.39
UdB:							
Udorthents	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to saturated zone	0.16		

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
UfA:							
Urban land----------	50	Not rated		Not rated		Not rated	
Fallsington, undrained----------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
UoE:							
Udorthents----------	100	Not rated		Not rated		Not rated	
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
UsB:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Not limited		Not limited		Not limited	
Beltsville----------	15	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.16	Slope	0.16	Slope	1.00
Beltsville----------	15	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.16	Slope	0.16	Depth to saturated zone	0.39
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.01	Depth to saturated zone	0.16	Shrink-swell	0.50
				Slope	0.01		
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to saturated zone	0.16		
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
				Depth to saturated zone	0.16		

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	
Woodstown-----------	25	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Slope	0.01	Depth to saturated zone	0.39
Sassafras-----------	20	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
WaA:							
Watchung------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
WcB:							
Watchung------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
WgB:							
Wheaton-------------	60	Not limited		Not limited		Not limited	
Glenelg-------------	40	Not limited		Not limited		Not limited	
WgD:							
Wheaton-------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Glenelg-------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
WhA:							
Wiltshire-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Depth to saturated zone	0.07
WhB:							
Wiltshire-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.07	Depth to saturated zone	1.00	Slope	0.12
						Depth to saturated zone	0.07
WoA:							
Woodstown-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39
WoB:							
Woodstown-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.39	Depth to saturated zone	1.00	Depth to saturated zone	0.39

Table 13a.--Building Site Development (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ZbA:							
Zekiah--------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Issue---------------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 13b.--Building Site Development (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.54		
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
		Shrink-swell	0.18				
BaA:							
Baile	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	0.78				
		Shrink-swell	0.50				
BeA:							
Benevola	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
BeB:							
Benevola	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
BeC:							
Benevola	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Slope	0.63	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
BrC:							
Brinklow	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	0.63
		Shrink-swell	0.50	Slope	0.63	Depth to bedrock	0.46
		Frost action	0.50	Depth to soft bedrock	0.46		
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to hard bedrock	0.02				
BrD:							
Brinklow	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Depth to bedrock	0.46
		Frost action	0.50	Depth to soft bedrock	0.46		
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to hard bedrock	0.02				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
BtF:							
Brinklow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Depth to bedrock	0.46
		Frost action	0.50	Depth to soft bedrock	0.46		
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to hard bedrock	0.02				
Blocktown	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to soft bedrock	1.00	Depth to soft bedrock	1.00	Depth to bedrock	1.00
		Low strength	1.00	Slope	1.00	Droughty	0.09
		Depth to hard bedrock	0.99				
		Frost action	0.50				
CeB:							
Chillum	85	Very limited		Very limited		Not limited	
		Frost action	1.00	Cutbanks cave	1.00		
		Low strength	0.78				
CeC:							
Chillum	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	0.01
		Low strength	0.78	Slope	0.01		
		Slope	0.01				
ChB:							
Chillum	55	Very limited		Very limited		Not limited	
		Frost action	1.00	Cutbanks cave	1.00		
		Low strength	0.78				
Russett	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
ChC:							
Chillum	55	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	0.01
		Low strength	0.78	Slope	0.01		
		Slope	0.01				
Russett	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10	Slope	0.01
		Depth to saturated zone	0.19	Slope	0.01		
		Slope	0.01				
Co:							
Codorus	50	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Flooding	0.80		

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
Co:							
Hatboro	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
Cp:							
Codorus, frequently flooded	50	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
Hatboro, frequently flooded	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Frost action	1.00	Flooding	0.80	Depth to saturated zone	1.00
		Flooding	1.00	Cutbanks cave	0.10		
CrD:							
Croom	55	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.84	Cutbanks cave	1.00	Slope	0.84
		Frost action	0.50	Slope	0.84	Droughty	0.51
Evesboro	30	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.84	Cutbanks cave	1.00	Slope	0.84
				Slope	0.84	Droughty	0.60
DhB:							
Downer	50	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
Hammonton	30	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	1.00		
DhC:							
Downer	50	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
Hammonton	30	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
DhD:							
Downer	50	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.84	Cutbanks cave	1.00	Slope	0.84
		Frost action	0.50	Slope	0.84		
Hammonton	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.84	Depth to saturated zone	1.00	Slope	0.84
		Frost action	0.50	Cutbanks cave	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Slope	0.84		

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
DxC:							
Downer--------------	50	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
Phalanx-------------	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.01	Dense layer	0.50	Droughty	0.86
				Cutbanks cave	0.10	Slope	0.01
				Slope	0.01		
EaB:							
Elioak--------------	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Large stones content	0.01
		Low strength	0.10				
EbC:							
Evesboro------------	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.01	Cutbanks cave	1.00	Droughty	0.60
				Slope	0.01	Slope	0.01
Fa:							
Fallsington, undrained----------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Cutbanks cave	1.00	Ponding	1.00
		Frost action	0.50	Ponding	1.00		
GaC:							
Gaila---------------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Gravel content	0.99
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.63
GaD:							
Gaila---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.99
GbA:							
Gladstone-----------	85	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
GbB:							
Gladstone-----------	85	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
GbC:							
Gladstone-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	0.50	Slope	0.63		
		Frost action	0.50				
GcB:							
Gladstone-----------	55	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Legore--------------	30	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GcC:							
Gladstone-----------	55	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	0.50	Slope	0.63		
		Frost action	0.50				
Legore--------------	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	0.94	Cutbanks cave	0.10		
		Slope	0.63				
		Frost action	0.50				
GdC:							
Gladstone-----------	55	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	0.50	Slope	0.63		
		Frost action	0.50				
Legore--------------	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	0.94	Cutbanks cave	0.10		
		Slope	0.63				
		Frost action	0.50				
GdD:							
Gladstone-----------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Legore--------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				
GfB:							
Gladstone-----------	50	Somewhat limited		Very limited		Not limited	
		Shrink-swell	0.50	Cutbanks cave	1.00		
		Frost action	0.50				
Urban land----------	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone-----------	45	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Shrink-swell	0.50	Slope	0.63		
		Frost action	0.50				
Urban land----------	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg-------------	85	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.78	Cutbanks cave	0.10		
		Frost action	0.50				
GgB:							
Glenelg-------------	85	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.78	Cutbanks cave	0.10		
		Frost action	0.50				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GgC:							
Glenelg	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.78	Slope	0.63	Slope	0.63
		Slope	0.63	Cutbanks cave	0.10		
		Frost action	0.50				
GhB:							
Glenelg	45	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.78	Cutbanks cave	0.10		
		Frost action	0.50				
Urban land	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Low strength	0.78	Slope	0.63	Slope	0.63
		Slope	0.63	Cutbanks cave	0.10		
		Frost action	0.50				
Urban land	30	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
GmA:							
Glenville	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Depth to cemented pan	0.46
				Cutbanks cave	0.10		
GmB:							
Glenville	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Depth to cemented pan	0.46
				Cutbanks cave	0.10		
GmC:							
Glenville	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Slope	0.63
		Slope	0.63	Slope	0.63	Depth to cemented pan	0.46
				Cutbanks cave	0.10		
GnB:							
Glenville	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Depth to cemented pan	0.46
				Cutbanks cave	0.10		
Baile	35	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	0.10		
		Low strength	0.78				
		Shrink-swell	0.50				
GoB:							
Glenville	60	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Depth to cemented pan	0.46
				Cutbanks cave	0.10		

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
GoB:							
Codorus-------------	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Flooding	0.60		
GuB:							
Glenville-----------	45	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	0.99	Depth to cemented pan	0.46
				Cutbanks cave	0.10		
Urban land----------	35	Not rated		Not rated		Not rated	
Udorthents----------	20	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.16		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
Ha:							
Hatboro-------------	60	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.60	Flooding	0.60
		Flooding	1.00	Cutbanks cave	0.10		
Codorus-------------	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	0.60
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Flooding	0.60		
JaB:							
Jackland------------	85	Very limited		Very limited		Somewhat limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.75
		Frost action	1.00	Too clayey	0.28		
		Low strength	1.00	Cutbanks cave	0.10		
		Depth to saturated zone	0.75				
LaB:							
Legore--------------	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				
LaC:							
Legore--------------	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.94	Cutbanks cave	0.10		
		Frost action	0.50				
		Slope	0.37				
LeB:							
Legore--------------	85	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LeC:							
Legore	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	0.94	Cutbanks cave	0.10		
		Slope	0.63				
		Frost action	0.50				
LmB:							
Legore	55	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				
Montalto	30	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Too clayey	0.03		
		Frost action	0.50				
LoB:							
Legore	40	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				
Montalto	35	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	1.00	Too clayey	0.03		
		Frost action	0.50				
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	0.94	Cutbanks cave	0.10		
		Slope	0.63				
		Frost action	0.50				
Montalto	30	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.63	Slope	0.63
		Shrink-swell	1.00	Cutbanks cave	0.10		
		Slope	0.63	Too clayey	0.03		
		Frost action	0.50				
Urban land	20	Not rated		Not rated		Not rated	
LrD:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.99
		Low strength	0.22				
LrF:							
Legore	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.94				
		Frost action	0.50				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
LrF:							
Relay	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.99
		Low strength	0.22				
MaB:							
Manor	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
MaC:							
Manor	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
MaD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
McD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
MgD:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.46
		Depth to hard bedrock	0.46	Cutbanks cave	1.00	Droughty	0.18
				Depth to soft bedrock	0.15	Large stones content	0.03
MgF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.46
		Depth to hard bedrock	0.46	Cutbanks cave	1.00	Droughty	0.18
				Depth to soft bedrock	0.15	Large stones content	0.03
MkF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Brinklow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Shrink-swell	0.50	Slope	1.00	Depth to bedrock	0.46
		Frost action	0.50	Depth to soft bedrock	0.46		
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to hard bedrock	0.02				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
MoB:							
Mount Lucas	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Depth to saturated zone	0.48	Cutbanks cave	1.00		
MoC:							
Mount Lucas	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.63
		Slope	0.63	Cutbanks cave	1.00	Depth to saturated zone	0.48
		Depth to saturated zone	0.48	Slope	0.63		
OcB:							
Occoquan	85	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
OcC:							
Occoquan	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
		Frost action	0.50	Cutbanks cave	0.10		
PfC:							
Patapsco	50	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.98
		Slope	0.01	Depth to saturated zone	0.73	Too sandy	0.50
				Slope	0.01	Slope	0.01
Fort Mott	40	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.01
		Slope	0.01	Slope	0.01	Slope	0.01
RsB:							
Russett	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
RsC:							
Russett	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10	Slope	0.01
		Depth to saturated zone	0.19	Slope	0.01		
		Slope	0.01				
RsD:							
Russett	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.84
		Slope	0.84	Slope	0.84	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
RtB:							
Russett	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
RtB:							
Alloway	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.54		
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
		Shrink-swell	0.18				
Hambrook	20	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
				Depth to saturated zone	0.73		
RtC:							
Russett	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10	Slope	0.01
		Depth to saturated zone	0.19	Slope	0.01		
		Slope	0.01				
Alloway	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	1.00	Too clayey	0.54	Slope	0.01
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
		Shrink-swell	0.18	Slope	0.01		
		Slope	0.01				
Hambrook	20	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Depth to saturated zone	0.73		
				Slope	0.01		
RtD:							
Russett	60	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.84
		Slope	0.84	Slope	0.84	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				
Alloway	25	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Slope	0.63
		Low strength	1.00	Slope	0.63	Depth to saturated zone	0.19
		Slope	0.63	Too clayey	0.54		
		Depth to saturated zone	0.19	Cutbanks cave	0.10		
		Shrink-swell	0.18				
Hambrook	15	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Cutbanks cave	1.00	Slope	0.63
		Frost action	0.50	Depth to saturated zone	0.73		
				Slope	0.63		
RuB:							
Russett	50	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Low strength	0.22	Cutbanks cave	0.10		
		Depth to saturated zone	0.19				

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RuB:							
Beltsville----------	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to	1.00	Depth to cemented	0.95
		Depth to	0.19	saturated zone		pan	
		saturated zone		Cutbanks cave	1.00	Depth to	0.19
				Dense layer	0.50	saturated zone	
RuC:							
Russett-------------	55	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to	1.00	Depth to	0.19
		Low strength	0.22	saturated zone		saturated zone	
		Depth to	0.19	Cutbanks cave	0.10	Slope	0.01
		saturated zone		Slope	0.01		
		Slope	0.01				
Beltsville----------	30	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to	1.00	Depth to cemented	0.95
		Depth to	0.19	saturated zone		pan	0.19
		saturated zone		Cutbanks cave	1.00	Depth to	0.19
		Slope	0.01	Dense layer	0.50	saturated zone	
				Slope	0.01	Slope	0.01
SaB:							
Sassafras-----------	85	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
SaC:							
Sassafras-----------	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
SfB:							
Sassafras-----------	85	Somewhat limited		Very limited		Very limited	
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.99
SrC:							
Sassafras-----------	55	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
Croom---------------	35	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.51
		Slope	0.01	Slope	0.01	Slope	0.01
SrD:							
Sassafras-----------	50	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.84	Cutbanks cave	1.00	Slope	0.84
		Frost action	0.50	Slope	0.84		
Croom---------------	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.84	Cutbanks cave	1.00	Slope	0.84
		Frost action	0.50	Slope	0.84	Droughty	0.51
SrE:							
Sassafras-----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
Croom---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	0.51
UaF:							
Udorthents----------	100	Not rated		Not rated		Not rated	

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
UbF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UcB:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum-------------	35	Very limited		Very limited		Not limited	
		Frost action	1.00	Cutbanks cave	1.00		
		Low strength	0.78				
Beltsville----------	15	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.95
		Depth to saturated zone	0.19	Cutbanks cave	1.00	Depth to saturated zone	0.19
				Dense layer	0.50		
UcD:							
Urban land----------	45	Not rated		Not rated		Not rated	
Chillum-------------	35	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Cutbanks cave	1.00	Slope	0.16
		Low strength	0.78	Slope	0.16		
		Slope	0.16				
Beltsville----------	15	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.95
		Depth to saturated zone	0.19	Cutbanks cave	1.00	Depth to saturated zone	0.19
		Slope	0.16	Dense layer	0.50	Slope	0.16
				Slope	0.16		
UdB:							
Udorthents----------	90	Somewhat limited		Somewhat limited		Not limited	
		Shrink-swell	0.50	Depth to saturated zone	0.16		
		Frost action	0.50	Cutbanks cave	0.10		
UfA:							
Urban land----------	50	Not rated		Not rated		Not rated	
Fallsington, undrained----------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Cutbanks cave	1.00	Ponding	1.00
		Frost action	0.50	Ponding	1.00		
UoE:							
Udorthents----------	100	Not rated		Not rated		Not rated	
Ur:							
Urban land----------	85	Not rated		Not rated		Not rated	
UsB:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
UsB:							
Beltsville----------	15	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.95
		Depth to saturated zone	0.19	Cutbanks cave	1.00	Depth to saturated zone	0.19
				Dense layer	0.50		
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras-----------	30	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.16
		Slope	0.16	Slope	0.16		
Beltsville----------	15	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.95
		Depth to saturated zone	0.19	Cutbanks cave	1.00	Depth to saturated zone	0.19
		Slope	0.16	Dense layer	0.50	Slope	0.16
				Slope	0.16		
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	0.16	Slope	0.01
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.01	Slope	0.01		
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Depth to saturated zone	0.16		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Depth to saturated zone	0.16		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	
Woodstown-----------	25	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
Sassafras-----------	20	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
WaA:							
Watchung	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
WcB:							
Watchung	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Too clayey	0.12		
		Low strength	1.00	Cutbanks cave	0.10		
		Shrink-swell	0.50				
WgB:							
Wheaton	60	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
Glenelg	40	Somewhat limited		Somewhat limited		Not limited	
		Low strength	0.78	Cutbanks cave	0.10		
		Frost action	0.50				
WgD:							
Wheaton	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Glenelg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	0.10		
		Frost action	0.50				
WhA:							
Wiltshire	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.54
		Depth to saturated zone	0.03	Cutbanks cave	1.00	Depth to saturated zone	0.03
WhB:							
Wiltshire	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to cemented pan	0.54
		Depth to saturated zone	0.03	Cutbanks cave	1.00	Depth to saturated zone	0.03
WoA:							
Woodstown	85	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	1.00		
WoB:							
Woodstown	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
		Depth to saturated zone	0.19	Cutbanks cave	1.00		

Table 13b.--Building Site Development (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
ZbA:							
Zekiah	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	1.00
		Frost action	0.50	Flooding	0.80		
Issue	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Flooding	0.80	Depth to saturated zone	1.00
				Cutbanks cave	0.10		

Table 14a.--Sanitary Facilities (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:					
Alloway-------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.32
BaA:					
Baile---------------	85	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00		
BeA:					
Benevola------------	85	Very limited		Not limited	
		Slow water movement	1.00		
BeB:					
Benevola------------	85	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.68
BeC:					
Benevola------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.63		
BrC:					
Brinklow------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slow water movement	1.00	Depth to soft bedrock	1.00
		Slope	0.63	Slope	1.00
BrD:					
Brinklow------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
		Slow water movement	1.00	Slope	1.00
BtF:					
Brinklow------------	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
		Slow water movement	1.00	Slope	1.00

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
BtF:					
Blocktown-----------	40	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
				Slope	1.00
CeB:					
Chillum-------------	85	Very limited		Somewhat limited	
		Slow water movement	0.99	Seepage	0.32
				Slope	0.32
CeC:					
Chillum-------------	85	Very limited		Very limited	
		Slow water movement	0.99	Slope	1.00
		Slope	0.01	Seepage	0.32
ChB:					
Chillum-------------	55	Very limited		Somewhat limited	
		Slow water movement	0.99	Seepage	0.32
				Slope	0.32
Russett-------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.32
ChC:					
Chillum-------------	55	Very limited		Very limited	
		Slow water movement	0.99	Slope	1.00
		Slope	0.01	Seepage	0.32
Russett-------------	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	0.01		
Co:					
Codorus-------------	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
Hatboro-------------	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Cp:					
Codorus, frequently flooded	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.99
Hatboro, frequently flooded	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.46	Seepage	0.53
CrD:					
Croom	55	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.84	Seepage	0.02
Evesboro	30	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
		Slope	0.84		
DhB:					
Downer	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.32
Hammonton	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
				Slope	0.32
DhC:					
Downer	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.01	Slope	1.00
Hammonton	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to saturated zone	1.00
		Slope	0.01	Slope	1.00
DhD:					
Downer	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.84	Seepage	1.00

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
DhD:					
Hammonton	35	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.84	Depth to saturated zone	1.00
DxC:					
Downer	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.01	Slope	1.00
Phalanx	35	Somewhat limited		Very limited	
		Slope	0.01	Slope	1.00
				Seepage	1.00
EaB:					
Elioak	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.72	Slope	0.92
				Seepage	0.50
EbC:					
Evesboro	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Filtering capacity	1.00	Slope	1.00
		Slope	0.01		
Fa:					
Fallsington, undrained	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.50		
GaC:					
Gaila	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
GaD:					
Gaila	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
GbA:					
Gladstone	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
GbB:					
Gladstone	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
GbC:					
Gladstone-----------	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
GcB:					
Gladstone-----------	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.92
Legore--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.92
GcC:					
Gladstone-----------	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
Legore--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.63		
GdC:					
Gladstone-----------	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
Legore--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.63		
GdD:					
Gladstone-----------	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Legore--------------	30	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
GfB:					
Gladstone-----------	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.32
Urban land----------	40	Not rated		Not rated	

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
GfC:					
Gladstone-----------	45	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slope	0.63		
Urban land----------	40	Not rated		Not rated	
GgA:					
Glenelg-------------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Seepage	0.53
GgB:					
Glenelg-------------	85	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Slope	0.92
				Seepage	0.53
GgC:					
Glenelg-------------	85	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	0.53
		Slope	0.63		
GhB:					
Glenelg-------------	45	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Seepage	0.53
				Slope	0.32
Urban land----------	35	Not rated		Not rated	
GhC:					
Glenelg-------------	45	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	0.53
		Slope	0.63		
Urban land----------	30	Somewhat limited		Not rated	
		Slow water movement	0.72		
		Slope	0.63		
GmA:					
Glenville-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Seepage	0.27
				Depth to saturated zone	0.19
		Slow water movement	0.72		
GmB:					
Glenville-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	0.92
				Seepage	0.27
		Slow water movement	0.72	Depth to saturated zone	0.19

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
GmC:					
Glenville-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	0.72	Seepage	0.27
		Slope	0.63	Depth to saturated zone	0.19
GnB:					
Glenville-----------	50	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	0.32
		Slow water movement	0.72	Seepage	0.27
				Depth to saturated zone	0.19
Baile---------------	35	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.32
GoB:					
Glenville-----------	60	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	0.32
		Slow water movement	0.72	Seepage	0.27
				Depth to saturated zone	0.19
Codorus-------------	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
GuB:					
Glenville-----------	45	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	0.32
		Slow water movement	0.72	Seepage	0.27
				Depth to saturated zone	0.19
Urban land----------	35	Not rated		Not rated	
Udorthents----------	20	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to soft bedrock	0.99
		Depth to bedrock	0.99	Slope	0.32
		Depth to saturated zone	0.43		

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
Ha:					
Hatboro-------------	60	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Slow water movement	1.00	Flooding	1.00
		Ponding	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00		
Codorus-------------	35	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	0.50
JaB:					
Jackland------------	85	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	0.99
		Depth to saturated zone	1.00	Slope	0.92
LaB:					
Legore--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.92
LaC:					
Legore--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.37		
LeB:					
Legore--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.92
LeC:					
Legore--------------	85	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.63		
LmB:					
Legore--------------	55	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.92

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
LmB:					
Montalto------------	30	Somewhat limited		Somewhat limited	
		Slow water movement	0.72	Slope	0.92
				Seepage	0.50
LoB:					
Legore--------------	40	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
				Slope	0.92
		Seepage, bottom layer	1.00		
Montalto------------	35	Somewhat limited		Somewhat limited	
		Slow water movement	0.72	Seepage	0.50
				Slope	0.32
Urban land----------	20	Not rated		Not rated	
LoC:					
Legore--------------	40	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	1.00
		Seepage, bottom layer	1.00		
		Slope	0.63		
Montalto------------	30	Somewhat limited		Very limited	
		Slow water movement	0.72	Slope	1.00
				Seepage	0.50
		Slope	0.63		
Urban land----------	20	Not rated		Not rated	
LrD:					
Legore--------------	55	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
		Seepage, bottom layer	1.00		
Relay---------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
		Depth to bedrock	0.01		
LrF:					
Legore--------------	55	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Seepage	1.00
		Slope	1.00		
		Seepage, bottom layer	1.00		
Relay---------------	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00		
		Depth to bedrock	0.01		

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
MaB:					
Manor	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.32
MaC:					
Manor	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.63	Seepage	1.00
MaD:					
Manor	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
McD:					
Manor	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
MgD:					
Manor	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Bannertown	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
MgF:					
Manor	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Bannertown	35	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
MkF:					
Manor	55	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Brinklow	30	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
		Slow water movement	1.00	Slope	1.00

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
MoB:					
Mount Lucas	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.92
MoC:					
Mount Lucas	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.63		
OcB:					
Occoquan	85	Somewhat limited		Very limited	
		Depth to bedrock	0.52	Seepage	1.00
		Slow water movement	0.50	Slope	0.92
				Depth to soft bedrock	0.08
OcC:					
Occoquan	85	Somewhat limited		Very limited	
		Slope	0.63	Slope	1.00
		Depth to bedrock	0.52	Seepage	1.00
		Slow water movement	0.50	Depth to soft bedrock	0.08
PfC:					
Patapsco	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.01	Depth to saturated zone	0.92
Fort Mott	40	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slope	0.01	Slope	1.00
RsB:					
Russett	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.08
RsC:					
Russett	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	0.01		

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
RsD:					
Russett	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Slope	0.84		
RtB:					
Russett	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.08
Alloway	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	0.08
Hambrook	20	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.92
				Slope	0.08
RtC:					
Russett	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	0.01		
Alloway	30	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01		
Hambrook	20	Very limited		Very limited	
		Slow water movement	1.00	Seepage	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Depth to saturated zone	0.92
RtD:					
Russett	60	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Slope	0.84		
Alloway	25	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	0.63		

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
RtD:					
Hambrook	15	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Seepage	1.00
		Slope	0.63	Depth to saturated zone	0.92
RuB:					
Russett	50	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.08
Beltsville	35	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.75
				Slope	0.08
RuC:					
Russett	55	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	1.00
		Slope	0.01		
Beltsville	30	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.01	Depth to saturated zone	0.75
SaB:					
Sassafras	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.32
SaC:					
Sassafras	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.01		
SfB:					
Sassafras	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.08

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
SrC:					
Sassafras	55	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.01		
Croom	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.01	Seepage	0.02
SrD:					
Sassafras	50	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.84	Seepage	1.00
		Slow water movement	0.50		
Croom	35	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Slope	0.84	Seepage	0.02
SrE:					
Sassafras	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Croom	30	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	1.00	Seepage	0.02
UaF:					
Udorthents	100	Not rated		Not rated	
UbF:					
Udorthents	100	Not rated		Not rated	
UcB:					
Urban land	45	Not rated		Not rated	
Chillum	35	Very limited		Somewhat limited	
		Slow water movement	0.99	Seepage	0.32
				Slope	0.08
Beltsville	15	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.75
				Slope	0.08
UcD:					
Urban land	45	Not rated		Not rated	

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
UcD:					
Chillum-------------	35	Very limited		Very limited	
		Slow water movement	0.99	Slope	1.00
		Slope	0.16	Seepage	0.32
Beltsville----------	15	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
		Slope	0.16	Depth to saturated zone	0.75
UdB:					
Udorthents----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Slope	0.08
		Depth to saturated zone	0.43		
UfA:					
Urban land----------	50	Not rated		Not rated	
Fallsington, undrained----------	30	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Ponding	1.00	Ponding	1.00
		Slow water movement	0.68		
UoE:					
Udorthents----------	100	Not rated		Not rated	
Ur:					
Urban land----------	85	Not rated		Not rated	
UsB:					
Urban land----------	50	Not rated		Not rated	
Sassafras-----------	30	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.08
Beltsville----------	15	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	0.75
				Slope	0.08
UsD:					
Urban land----------	50	Not rated		Not rated	

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
UsD:					
Sassafras-----------	30	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	1.00
		Slow water movement	0.50		
		Slope	0.16		
Beltsville----------	15	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	1.00
				Depth to saturated zone	0.75
		Slope	0.16		
UtD:					
Urban land----------	60	Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	0.43		
		Slope	0.01		
UuB:					
Urban land----------	60	Not rated		Not rated	
Udorthents----------	40	Very limited		Somewhat limited	
		Slow water movement	1.00	Depth to soft bedrock	0.42
		Depth to bedrock	0.78	Slope	0.32
		Depth to saturated zone	0.43		
UuD:					
Urban land----------	60	Not rated		Not rated	
Udorthents----------	40	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
				Depth to soft bedrock	0.42
		Slope	1.00		
		Depth to bedrock	0.78		
		Depth to saturated zone	0.43		
UwC:					
Urban land----------	50	Not rated		Not rated	
Woodstown-----------	25	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	1.00
		Slow water movement	0.50		
		Slope	0.01		

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
UwC:					
Sassafras-----------	20	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.01		
WaA:					
Watchung------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.21
WcB:					
Watchung------------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.68
				Seepage	0.21
WgB:					
Wheaton-------------	60	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Seepage	0.50
				Slope	0.32
Glenelg-------------	40	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Seepage	0.53
				Slope	0.32
WgD:					
Wheaton-------------	60	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Glenelg-------------	40	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	0.53
WhA:					
Wiltshire-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Seepage	0.53
		Slow water movement	0.47	Depth to saturated zone	0.44
WhB:					
Wiltshire-----------	85	Very limited		Very limited	
		Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Depth to saturated zone	1.00	Slope	0.68
				Seepage	0.53
		Slow water movement	0.47	Depth to saturated zone	0.44

Table 14a.--Sanitary Facilities (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
WoA:					
Woodstown-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
WoB:					
Woodstown-----------	85	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.08
		Slow water movement	0.50		
ZbA:					
Zekiah--------------	50	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Issue---------------	40	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	0.50	Seepage	1.00

Table 14b.--Sanitary Facilities (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	0.50			Depth to saturated zone	0.86
BaA:							
Baile	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
BeA:							
Benevola	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
BeB:							
Benevola	85	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
BeC:							
Benevola	85	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63
BrC:							
Brinklow	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
BrD:							
Brinklow	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
BtF:							
Brinklow	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
Blocktown	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
CeB:							
Chillum	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Gravel content	0.77
						Too clayey	0.50
CeC:							
Chillum	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.01	Gravel content	0.77
		Slope	0.01			Too clayey	0.50
						Slope	0.01

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
ChB:							
Chillum	55	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Gravel content	0.77
						Too clayey	0.50
Russett	35	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
ChC:							
Chillum	55	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.01	Gravel content	0.77
		Slope	0.01			Too clayey	0.50
						Slope	0.01
Russett	35	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
Co:							
Codorus	50	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Gravel content	0.87
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
Hatboro	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00				
Cp:							
Codorus, frequently flooded	50	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	0.86
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
Hatboro, frequently flooded	35	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
CrD:							
Croom	55	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Gravel content	1.00
						Slope	0.84
Evesboro	30	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	0.84	Seepage	1.00
		Slope	0.84			Slope	0.84

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
DhB:							
Downer	50	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
Hammonton	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00			Depth to saturated zone	0.86
DhC:							
Downer	50	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
Hammonton	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	0.01	Depth to saturated zone	0.86
		Slope	0.01			Slope	0.01
DhD:							
Downer	50	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Slope	0.84	Slope	0.84	Slope	0.84
		Too sandy	0.50			Too sandy	0.50
Hammonton	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	1.00	Slope	0.84	Depth to saturated zone	0.86
		Slope	0.84			Slope	0.84
DxC:							
Downer	50	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
Phalanx	35	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.01	Seepage	1.00	Seepage	0.01
				Slope	0.01	Slope	0.01
EaB:							
Elioak	85	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Hard to compact	0.50

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
EbC:							
Evesboro	85	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	1.00
		Too sandy	1.00	Slope	0.01	Seepage	1.00
		Slope	0.01			Slope	0.01
Fa:							
Fallsington, undrained	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Seepage	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Ponding	1.00	Seepage	1.00
		Ponding	1.00			Ponding	1.00
GaC:							
Gaila	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.50
GaD:							
Gaila	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
GbA:							
Gladstone	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
GbB:							
Gladstone	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
GbC:							
Gladstone	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
GcB:							
Gladstone	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
Legore	30	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
GcC:							
Gladstone	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GcC:							
Legore	30	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
GdC:							
Gladstone	55	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
Legore	30	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
GdD:							
Gladstone	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
Legore	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
GfB:							
Gladstone	50	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
Urban land	40	Not rated		Not limited		Not rated	
GfC:							
Gladstone	45	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.52
		Too sandy	0.50			Too sandy	0.50
Urban land	40	Not rated		Somewhat limited		Not rated	
				Slope	0.63		
GgA:							
Glenelg	85	Not limited		Not limited		Not limited	
GgB:							
Glenelg	85	Not limited		Not limited		Not limited	
GgC:							
Glenelg	85	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
GhB:							
Glenelg	45	Not limited		Not limited		Not limited	
Urban land	35	Not rated		Not limited		Not rated	

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
GhC:							
Glenelg	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.63	Slope	0.63	Slope	0.63
Urban land	30	Somewhat limited		Somewhat limited		Not rated	
		Slope	0.63	Slope	0.63		
GmA:							
Glenville	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.19	Depth to saturated zone	0.47
GmB:							
Glenville	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.19	Depth to saturated zone	0.47
GmC:							
Glenville	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.63	Slope	0.63	Slope	0.63
				Depth to saturated zone	0.19	Depth to saturated zone	0.47
GnB:							
Glenville	50	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.19	Depth to saturated zone	0.47
Baile	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
GoB:							
Glenville	60	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.19	Depth to saturated zone	0.47
Codorus	35	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Gravel content	0.87
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
GuB:							
Glenville	45	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.86	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.19	Depth to saturated zone	0.47
Urban land	35	Not rated		Not limited		Not rated	

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
GuB:							
Udorthents----------	20	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to bedrock	0.99
		Depth to bedrock	1.00	Depth to bedrock	0.99		
Ha:							
Hatboro-------------	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00				
Codorus-------------	35	Very limited		Very limited		Somewhat limited	
		Flooding	1.00	Flooding	1.00	Gravel content	0.87
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
JaB:							
Jackland------------	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	0.99	Too clayey	1.00
		Too clayey	1.00			Hard to compact	1.00
						Depth to saturated zone	0.99
LaB:							
Legore--------------	85	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
LaC:							
Legore--------------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Slope	0.37
		Slope	0.37				
LeB:							
Legore--------------	85	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
LeC:							
Legore--------------	85	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
LmB:							
Legore--------------	55	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
Montalto------------	30	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
LoB:							
Legore--------------	40	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LoB:							
Montalto------------	35	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
Urban land----------	20	Not rated		Not limited		Not rated	
LoC:							
Legore--------------	40	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.63	Slope	0.63
		Slope	0.63				
Montalto------------	30	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.63	Too clayey	1.00
		Slope	0.63			Hard to compact	1.00
						Slope	0.63
Urban land----------	20	Not rated		Somewhat limited		Not rated	
				Slope	0.63		
LrD:							
Legore--------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
Relay---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Seepage	0.50
		Seepage, bottom layer	1.00				
LrF:							
Legore--------------	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
Relay---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00			Seepage	0.50
		Seepage, bottom layer	1.00				
MaB:							
Manor---------------	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.42
MaC:							
Manor---------------	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
				Slope	0.63	Seepage	0.50
		Slope	0.63			Gravel content	0.42
MaD:							
Manor---------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.42

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
McD:							
Manor	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.42
MgD:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.42
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
MgF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.42
Bannertown	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
MkF:							
Manor	55	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.42
Brinklow	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
MoB:							
Mount Lucas	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Seepage, bottom layer	1.00	Seepage	1.00	Too clayey	0.50
		Too clayey	0.50				
MoC:							
Mount Lucas	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Too clayey	0.50
		Too clayey	0.50				
OcB:							
Occoquan	85	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	0.21
				Depth to bedrock	0.08	Depth to bedrock	0.08

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
OcC:							
Occoquan------------	85	Very limited		Very limited		Somewhat limited	
		Depth to bedrock	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.21
				Depth to bedrock	0.08	Depth to bedrock	0.08
PfC:							
Patapsco------------	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
		Too sandy	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Slope	0.01	Slope	0.01
		Slope	0.01				
Fort Mott-----------	40	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
RsB:							
Russett-------------	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
RsC:							
Russett-------------	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
RsD:							
Russett-------------	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Slope	0.84	Slope	0.84	Slope	0.84
		Too clayey	0.50			Too clayey	0.50
RtB:							
Russett-------------	50	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
Alloway-------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	0.50			Depth to saturated zone	0.86
Hambrook------------	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Too sandy	0.50	Seepage	1.00	Too sandy	0.50
RtC:							
Russett-------------	50	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
RtC:							
Alloway-------------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	0.50	Slope	0.01	Depth to saturated zone	0.86
		Slope	0.01			Slope	0.01
Hambrook------------	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Too sandy	0.50	Seepage	1.00	Too sandy	0.50
		Slope	0.01	Slope	0.01	Slope	0.01
RtD:							
Russett-------------	60	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Slope	0.84	Slope	0.84	Slope	0.84
		Too clayey	0.50			Too clayey	0.50
Alloway-------------	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Slope	0.63	Slope	0.63	Depth to saturated zone	0.86
		Too clayey	0.50			Slope	0.63
Hambrook------------	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Slope	0.63	Seepage	1.00	Slope	0.63
		Too sandy	0.50	Slope	0.63	Too sandy	0.50
RuB:							
Russett-------------	50	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50			Too clayey	0.50
Beltsville----------	35	Very limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.75	Depth to saturated zone	0.86
RuC:							
Russett-------------	55	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Too clayey	0.50	Slope	0.01	Too clayey	0.50
		Slope	0.01			Slope	0.01
Beltsville----------	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.01	Depth to saturated zone	0.75	Depth to saturated zone	0.86
				Slope	0.01	Slope	0.01
SaB:							
Sassafras-----------	85	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SaC:							
Sassafras-----------	85	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
SfB:							
Sassafras-----------	85	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
SrC:							
Sassafras-----------	55	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
Croom---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Gravel content	1.00
						Slope	0.01
SrD:							
Sassafras-----------	50	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Slope	0.84	Slope	0.84	Slope	0.84
		Too sandy	0.50			Too sandy	0.50
Croom---------------	35	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.84	Slope	0.84	Gravel content	1.00
						Slope	0.84
SrE:							
Sassafras-----------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
Croom---------------	30	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
UaF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents----------	100	Not rated		Not rated		Not rated	
UcB:							
Urban land----------	45	Not rated		Not limited		Not rated	
Chillum-------------	35	Somewhat limited		Not limited		Somewhat limited	
		Too clayey	0.50			Gravel content	0.77
						Too clayey	0.50
Beltsville----------	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.75	Depth to saturated zone	0.86

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
UcD:							
Urban land	45	Not rated		Somewhat limited		Not rated	
				Slope	0.16		
Chillum	35	Somewhat limited		Somewhat limited		Somewhat limited	
		Too clayey	0.50	Slope	0.16	Gravel content	0.77
		Slope	0.16			Too clayey	0.50
						Slope	0.16
Beltsville	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.16	Depth to saturated zone	0.75	Depth to saturated zone	0.86
				Slope	0.16	Slope	0.16
UdB:							
Udorthents	90	Very limited		Very limited		Not limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
UfA:							
Urban land	50	Not rated		Not limited		Not rated	
Fallsington, undrained	30	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too sandy	1.00	Seepage	1.00	Too sandy	1.00
		Seepage, bottom layer	1.00	Ponding	1.00	Seepage	1.00
		Ponding	1.00			Ponding	1.00
UoE:							
Udorthents	100	Not rated		Not rated		Not rated	
Ur:							
Urban land	85	Not rated		Not limited		Not rated	
UsB:							
Urban land	50	Not rated		Not limited		Not rated	
Sassafras	30	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50			Too sandy	0.50
Beltsville	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.75	Depth to saturated zone	0.86
UsD:							
Urban land	50	Not rated		Somewhat limited		Not rated	
				Slope	0.16		

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
UsD:							
Sassafras-----------	30	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.16	Too sandy	0.50
		Slope	0.16			Slope	0.16
Beltsville----------	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	0.99	Depth to cemented pan	1.00	Depth to cemented pan	1.00
		Slope	0.16	Depth to saturated zone	0.75	Depth to saturated zone	0.86
				Slope	0.16	Slope	0.16
UtD:							
Urban land----------	60	Not rated		Somewhat limited		Not rated	
				Slope	0.01		
Udorthents----------	40	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
UuB:							
Urban land----------	60	Not rated		Not limited		Not rated	
Udorthents----------	40	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to bedrock	0.42
		Depth to bedrock	1.00	Depth to bedrock	0.42		
UuD:							
Urban land----------	60	Not rated		Very limited		Not rated	
				Slope	1.00		
Udorthents----------	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Depth to bedrock	1.00	Slope	1.00	Depth to bedrock	0.42
		Slope	1.00	Depth to bedrock	0.42		
UwC:							
Urban land----------	50	Not rated		Somewhat limited		Not rated	
				Slope	0.01		
Woodstown-----------	25	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Depth to saturated zone	0.86
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01
Sassafras-----------	20	Very limited		Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	1.00
		Too sandy	0.50	Slope	0.01	Too sandy	0.50
		Slope	0.01			Slope	0.01

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
WaA:							
Watchung	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
WcB:							
Watchung	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
WgB:							
Wheaton	60	Not limited		Not limited		Not limited	
Glenelg	40	Not limited		Not limited		Not limited	
WgD:							
Wheaton	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Glenelg	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
WhA:							
Wiltshire	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.95	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.44	Depth to saturated zone	0.68
WhB:							
Wiltshire	85	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.95	Depth to cemented pan	1.00	Depth to cemented pan	1.00
				Depth to saturated zone	0.44	Depth to saturated zone	0.68
WoA:							
Woodstown	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
WoB:							
Woodstown	85	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50

Table 14b.--Sanitary Facilities (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ZbA:							
Zekiah--------------	50	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Too sandy	0.50
		Too sandy	0.50				
Issue---------------	40	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Seepage	1.00
				Seepage	1.00		

Table 15a.--Construction Materials (Part 1)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
AwB:					
Alloway-------------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
BaA:					
Baile---------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
BeA:					
Benevola------------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
BeB:					
Benevola------------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
BeC:					
Benevola------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BrC:					
Brinklow------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
BrD:					
Brinklow------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
BtF:					
Brinklow------------	50	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Blocktown-----------	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CeB:					
Chillum-------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
CeC:					
Chillum-------------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
ChB:					
Chillum	55	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Russett	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
ChC:					
Chillum	55	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Russett	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Co:					
Codorus	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Hatboro	35	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.01
Cp:					
Codorus, frequently flooded	50	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Hatboro, frequently flooded	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
CrD:					
Croom	55	Fair		Fair	
		Thickest layer	0.44	Thickest layer	0.09
		Bottom layer	0.66	Bottom layer	0.30
Evesboro	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.11
		Thickest layer	0.00	Bottom layer	0.90
DhB:					
Downer	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.31
Hammonton	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.76
DhC:					
Downer	50	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.09
		Bottom layer	0.00	Bottom layer	0.31

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
DhC:					
Hammonton-----------	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.99
DhD:					
Downer--------------	50	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.09
		Bottom layer	0.00	Bottom layer	0.31
Hammonton-----------	35	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.09
		Bottom layer	0.00	Bottom layer	0.99
DxC:					
Downer--------------	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.31
Phalanx-------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
EaB:					
Elioak--------------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
EbC:					
Evesboro------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.11
		Bottom layer	0.00	Bottom layer	0.90
Fa:					
Fallsington, undrained----------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.50
GaC:					
Gaila---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
GaD:					
Gaila---------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
GbA:					
Gladstone-----------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.07
GbB:					
Gladstone-----------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.07
GbC:					
Gladstone-----------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.07

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
GcB:					
Gladstone-----------	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.07
Legore--------------	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
GcC:					
Gladstone-----------	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.07
Legore--------------	30	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
GdC:					
Gladstone-----------	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.07
Legore--------------	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
GdD:					
Gladstone-----------	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.07
Legore--------------	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
GfB:					
Gladstone-----------	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.07
Urban land----------	40	Not rated		Not rated	
GfC:					
Gladstone-----------	45	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.07
Urban land----------	40	Not rated		Not rated	
GgA:					
Glenelg-------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
GgB:					
Glenelg-------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
GgC:					
Glenelg-------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
GhB:					
Glenelg-------------	45	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Urban land----------	35	Not rated		Not rated	
GhC:					
Glenelg-------------	45	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Urban land----------	30	Not rated		Not rated	
GmA:					
Glenville-----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GmB:					
Glenville-----------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GmC:					
Glenville-----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
GnB:					
Glenville-----------	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Baile---------------	35	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
GoB:					
Glenville-----------	60	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Codorus-------------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
GuB:					
Glenville-----------	45	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Urban land----------	35	Not rated		Not rated	
Udorthents----------	20	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Ha:					
Hatboro-------------	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.01

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Ha:					
Codorus	35	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
JaB:					
Jackland	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
LaB:					
Legore	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
LaC:					
Legore	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
LeB:					
Legore	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
LeC:					
Legore	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
LmB:					
Legore	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
Montalto	30	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
LoB:					
Legore	40	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.04
Montalto	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Urban land	20	Not rated		Not rated	
LoC:					
Legore	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Montalto	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Urban land	20	Not rated		Not rated	

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
LrD:					
Legore	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Relay	30	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.09
LrF:					
Legore	55	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Relay	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.09
MaB:					
Manor	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.04
MaC:					
Manor	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
MaD:					
Manor	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.04
McD:					
Manor	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
MgD:					
Manor	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
Bannertown	35	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.06
MgF:					
Manor	55	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.04
Bannertown	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.06
MkF:					
Manor	55	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.04
Brinklow	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
MoB:					
Mount Lucas	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
MoC:					
Mount Lucas	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
OcB:					
Occoquan	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.03
OcC:					
Occoquan	85	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.01
		Bottom layer	0.00	Thickest layer	0.03
PfC:					
Patapsco	50	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.42
Fort Mott	40	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.11
		Bottom layer	0.00	Thickest layer	0.12
RsB:					
Russett	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
RsC:					
Russett	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
RsD:					
Russett	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
RtB:					
Russett	50	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Alloway	30	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Hambrook	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
RtC:					
Russett	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
RtC:					
Alloway	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hambrook	20	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
RtD:					
Russett	60	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Alloway	25	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Hambrook	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.08
RuB:					
Russett	50	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Beltsville	35	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.23
RuC:					
Russett	55	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Beltsville	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.23
SaB:					
Sassafras	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.12
SaC:					
Sassafras	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.12
SfB:					
Sassafras	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.12
SrC:					
Sassafras	55	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.12
Croom	35	Fair		Fair	
		Thickest layer	0.44	Thickest layer	0.09
		Bottom layer	0.66	Bottom layer	0.30

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
SrD:					
Sassafras-----------	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.12
Croom---------------	35	Fair		Fair	
		Thickest layer	0.44	Thickest layer	0.09
		Bottom layer	0.66	Bottom layer	0.30
SrE:					
Sassafras-----------	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.12
Croom---------------	30	Fair		Fair	
		Thickest layer	0.44	Thickest layer	0.09
		Bottom layer	0.66	Bottom layer	0.30
UaF:					
Udorthents----------	100	Not rated		Not rated	
UbF:					
Udorthents----------	100	Not rated		Not rated	
UcB:					
Urban land----------	45	Not rated		Not rated	
Chillum-------------	35	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Beltsville----------	15	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.23
UcD:					
Urban land----------	45	Not rated		Not rated	
Chillum-------------	35	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Beltsville----------	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.23
UdB:					
Udorthents----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.03
UfA:					
Urban land----------	50	Not rated		Not rated	
Fallsington, undrained----------	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.01
		Thickest layer	0.00	Bottom layer	0.50
UoE:					
Udorthents----------	100	Not rated		Not rated	

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
Ur:					
Urban land	85	Not rated		Not rated	
UsB:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.12
Beltsville	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.23
UsD:					
Urban land	50	Not rated		Not rated	
Sassafras	30	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.12
Beltsville	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.23
UtD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.03
		Bottom layer	0.00	Bottom layer	0.03
UuB:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
UuD:					
Urban land	60	Not rated		Not rated	
Udorthents	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
UwC:					
Urban land	50	Not rated		Not rated	
Woodstown	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.10
Sassafras	20	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.12
WaA:					
Watchung	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00

Table 15a.--Construction Materials (Part 1)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
WcB:					
Watchung------------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
WgB:					
Wheaton-------------	60	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Glenelg-------------	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
WgD:					
Wheaton-------------	60	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
Glenelg-------------	40	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
WhA:					
Wiltshire-----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
WhB:					
Wiltshire-----------	85	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
WoA:					
Woodstown-----------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.17
WoB:					
Woodstown-----------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.09
		Bottom layer	0.00	Bottom layer	0.17
ZbA:					
Zekiah--------------	50	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.50
Issue---------------	40	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00

Table 15b.--Construction Materials (Part 2)

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway-------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.00	Wetness depth	0.53	Too acid	0.18
		Organic matter content low	0.19	Shrink-swell	0.99	Wetness depth	0.53
		Water erosion	0.68				
BaA:							
Baile---------------	85	Fair		Poor		Poor	
		Organic matter content low	0.18	Wetness depth	0.00	Wetness depth	0.00
						Too acid	0.88
		Too acid	0.50				
		Water erosion	0.90				
BeA:							
Benevola------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.30	Shrink-swell	0.87		
BeB:							
Benevola------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.30	Shrink-swell	0.87		
BeC:							
Benevola------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.30	Shrink-swell	0.87	Slope	0.37
BrC:							
Brinklow------------	85	Fair		Poor		Poor	
		Organic matter content low	0.29	Depth to bedrock	0.00	Rock fragments	0.00
				Low strength	0.78	Slope	0.37
		Too acid	0.50	Shrink-swell	0.99	Depth to bedrock	0.54
		Depth to bedrock	0.54			Too acid	0.88
		Droughty	0.65				
BrD:							
Brinklow------------	85	Fair		Poor		Poor	
		Organic matter content low	0.29	Depth to bedrock	0.00	Rock fragments	0.00
				Slope	0.50	Slope	0.00
		Too acid	0.50	Low strength	0.78	Depth to bedrock	0.54
		Depth to bedrock	0.54	Shrink-swell	0.99	Too acid	0.88
		Droughty	0.65				
BtF:							
Brinklow------------	50	Fair		Poor		Poor	
		Organic matter content low	0.29	Depth to bedrock	0.00	Rock fragments	0.00
				Slope	0.00	Slope	0.00
		Too acid	0.50	Low strength	0.78	Depth to bedrock	0.54
		Depth to bedrock	0.54	Shrink-swell	0.99	Too acid	0.88
		Droughty	0.65				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
BtF:							
Blocktown	40	Poor		Poor		Poor	
		Depth to bedrock	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Droughty	0.08	Slope	0.00	Slope	0.00
		Too acid	0.50	Low strength	0.00	Too acid	0.95
CeB:							
Chillum	85	Fair		Good		Poor	
		Organic matter content low	0.02			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
CeC:							
Chillum	85	Fair		Good		Poor	
		Organic matter content low	0.02			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
ChB:							
Chillum	55	Fair		Good		Poor	
		Organic matter content low	0.02			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
Russett	35	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
ChC:							
Chillum	55	Fair		Good		Poor	
		Organic matter content low	0.02			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
Russett	35	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
Co:							
Codorus	50	Fair		Fair		Poor	
		Too acid	0.32	Wetness depth	0.53	Rock fragments	0.00
		Organic matter content low	0.50			Hard to reclaim (rock fragments)	0.00
		Water erosion	0.99			Wetness depth	0.53
						Too acid	0.88
Hatboro	35	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.88				
		Water erosion	0.99				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
Cp:							
Codorus, frequently flooded	50	Fair		Fair		Fair	
		Too acid	0.03	Wetness depth	0.53	Wetness depth	0.53
		Water erosion	0.99			Too acid	0.98
Hatboro, frequently flooded	35	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.50			Too acid	0.50
CrD:							
Croom	55	Fair		Good		Poor	
		Too acid	0.05			Rock fragments	0.00
		Organic matter content low	0.08			Hard to reclaim (rock fragments)	0.00
		Droughty	0.42			Slope	0.16
		Too clayey	0.71			Too clayey	0.40
		Water erosion	0.99			Too acid	0.76
Evesboro	30	Poor		Good		Fair	
		Wind erosion	0.00			Slope	0.16
		Organic matter content low	0.08			Too sandy	0.22
		Too sandy	0.22			Too acid	0.88
		Too acid	0.50				
		Droughty	0.77				
DhB:							
Downer	50	Fair		Good		Fair	
		Organic matter content low	0.08			Too acid	0.95
		Too acid	0.50				
Hammonton	30	Poor		Fair		Fair	
		Wind erosion	0.00	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.08				
		Too acid	0.68				
DhC:							
Downer	50	Fair		Good		Fair	
		Organic matter content low	0.08			Too acid	0.95
		Too acid	0.50				
Hammonton	30	Poor		Fair		Fair	
		Wind erosion	0.00	Wetness depth	0.53	Wetness depth	0.53
		Organic matter content low	0.08				
		Too acid	0.68				
DhD:							
Downer	50	Fair		Good		Fair	
		Organic matter content low	0.08			Slope	0.16
		Too acid	0.50			Too acid	0.95
Hammonton	35	Poor		Fair		Fair	
		Wind erosion	0.00	Wetness depth	0.53	Slope	0.16
		Organic matter content low	0.08			Wetness depth	0.53
		Too acid	0.68				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
DxC:							
Downer	50	Fair		Good		Fair	
		Organic matter content low	0.08			Too acid	0.95
		Too acid	0.50				
Phalanx	35	Poor		Fair		Fair	
		Wind erosion	0.00	Stone content	0.03	Too acid	0.32
		Droughty	0.00			Too sandy	0.99
		Too acid	0.50				
		Too sandy	0.99				
EaB:							
Elioak	85	Fair		Fair		Fair	
		Too clayey	0.08	Low strength	0.10	Too clayey	0.05
		Organic matter content low	0.12				
		Too acid	0.68				
		Water erosion	0.99				
EbC:							
Evesboro	85	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.22
		Organic matter content low	0.08			Too acid	0.88
		Too sandy	0.22				
		Too acid	0.50				
		Droughty	0.77				
Fa:							
Fallsington, undrained	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.46			Too acid	0.98
GaC:							
Gaila	85	Fair		Good		Fair	
		Organic matter content low	0.29			Slope	0.37
						Rock fragments	0.72
		Too acid	0.50			Too acid	0.88
GaD:							
Gaila	85	Fair		Fair		Poor	
		Organic matter content low	0.29	Slope	0.50	Slope	0.00
						Rock fragments	0.72
		Too acid	0.50			Too acid	0.88
GbA:							
Gladstone	85	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
GbB:							
Gladstone	85	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
GbC:							
Gladstone	85	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
						Rock fragments	0.50
		Too acid	0.50			Too acid	0.88

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
GcB:							
Gladstone	55	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
Legore	30	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32				
GcC:							
Gladstone	55	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
						Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
Legore	30	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32			Slope	0.37
GdC:							
Gladstone	55	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
						Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
Legore	30	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32			Slope	0.37
GdD:							
Gladstone	55	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
						Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
Legore	30	Fair		Poor		Poor	
		Too clayey	0.02	Low strength	0.00	Slope	0.00
		Too acid	0.32	Slope	0.50	Too clayey	0.01
GfB:							
Gladstone	50	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
Urban land	40	Not rated		Not rated		Not rated	
GfC:							
Gladstone	45	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.37
						Rock fragments	0.50
		Too acid	0.50			Too acid	0.88
Urban land	40	Not rated		Not rated		Not rated	
GgA:							
Glenelg	85	Fair		Good		Good	
		Too acid	0.68				
		Water erosion	0.99				
GgB:							
Glenelg	85	Fair		Good		Good	
		Too acid	0.68				
		Water erosion	0.99				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GgC:							
Glenelg	85	Fair		Good		Fair	
		Too acid	0.68			Slope	0.37
		Water erosion	0.99				
GhB:							
Glenelg	45	Fair		Good		Good	
		Too acid	0.68				
		Water erosion	0.99				
Urban land	35	Not rated		Not rated		Not rated	
GhC:							
Glenelg	45	Fair		Good		Fair	
		Too acid	0.68			Slope	0.37
		Water erosion	0.99				
Urban land	30	Not rated		Good		Fair	
						Slope	0.37
						Rock fragments	0.50
						Too acid	0.95
GmA:							
Glenville	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Rock fragments	0.12
		Too acid	0.46	Wetness depth	0.89	Depth to cemented pan	0.54
		Depth to cemented pan	0.54			Wetness depth	0.89
		Droughty	0.55				
		Water erosion	0.90				
GmB:							
Glenville	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Rock fragments	0.12
		Too acid	0.46	Wetness depth	0.89	Depth to cemented pan	0.54
		Depth to cemented pan	0.54			Wetness depth	0.89
		Droughty	0.55				
		Water erosion	0.90				
GmC:							
Glenville	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Rock fragments	0.12
		Too acid	0.46	Wetness depth	0.89	Slope	0.37
		Depth to cemented pan	0.54			Depth to cemented pan	0.54
		Droughty	0.55			Wetness depth	0.89
		Water erosion	0.90				
GnB:							
Glenville	50	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Rock fragments	0.12
		Too acid	0.46	Wetness depth	0.89	Depth to cemented pan	0.54
		Depth to cemented pan	0.54			Wetness depth	0.89
		Droughty	0.55				
		Water erosion	0.90				
Baile	35	Fair		Poor		Poor	
		Organic matter content low	0.18	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.50			Too acid	0.88
		Water erosion	0.90				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
GoB:							
Glenville	60	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Rock fragments	0.12
		Too acid	0.46	Wetness depth	0.89	Depth to cemented pan	0.54
		Depth to cemented pan	0.54			Wetness depth	0.89
		Droughty	0.55				
		Water erosion	0.90				
Codorus	35	Fair		Fair		Poor	
		Too acid	0.32	Wetness depth	0.53	Hard to reclaim (rock fragments)	0.00
		Organic matter content low	0.50			Rock fragments	0.00
		Water erosion	0.99			Wetness depth	0.53
						Too acid	0.88
GuB:							
Glenville	45	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to cemented pan	0.00	Rock fragments	0.12
		Too acid	0.46	Wetness depth	0.89	Depth to cemented pan	0.54
		Depth to cemented pan	0.54			Wetness depth	0.89
		Droughty	0.55				
		Water erosion	0.90				
Urban land	35	Not rated		Not rated		Not rated	
Udorthents	20	Fair		Poor		Good	
		Too acid	0.84	Low strength	0.00		
		Water erosion	0.99	Depth to bedrock	0.00		
				Shrink-swell	0.87		
Ha:							
Hatboro	60	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.88				
		Water erosion	0.99				
Codorus	35	Fair		Fair		Poor	
		Too acid	0.32	Wetness depth	0.53	Hard to reclaim (rock fragments)	0.00
		Organic matter content low	0.50			Rock fragments	0.00
		Water erosion	0.99			Wetness depth	0.53
						Too acid	0.88
JaB:							
Jackland	85	Poor		Poor		Poor	
		Too clayey	0.00	Shrink-swell	0.00	Too clayey	0.00
		Water erosion	0.37	Low strength	0.00	Wetness depth	0.14
		Organic matter content low	0.40	Wetness depth	0.14		
		Droughty	0.72				
		Too acid	0.84				
LaB:							
Legore	85	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
LaC:							
Legore	85	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32			Slope	0.63
LeB:							
Legore	85	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32				
LeC:							
Legore	85	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32			Slope	0.37
LmB:							
Legore	55	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32				
Montalto	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.40	Shrink-swell	0.34		
		Too acid	0.92				
LoB:							
Legore	40	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32				
Montalto	35	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.40	Shrink-swell	0.34		
		Too acid	0.92				
Urban land	20	Not rated		Not rated		Not rated	
LoC:							
Legore	40	Fair		Poor		Fair	
		Too clayey	0.02	Low strength	0.00	Too clayey	0.01
		Too acid	0.32			Slope	0.37
Montalto	30	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.40	Shrink-swell	0.34	Slope	0.37
		Too acid	0.92				
Urban land	20	Not rated		Not rated		Not rated	
LrD:							
Legore	55	Fair		Poor		Poor	
		Too clayey	0.02	Low strength	0.00	Slope	0.00
		Too acid	0.32	Slope	0.50	Too clayey	0.01
Relay	30	Fair		Fair		Poor	
		Organic matter content low	0.03	Slope	0.50	Slope	0.00
		Too acid	0.68				
		Water erosion	0.68				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
LrF:							
Legore	55	Fair		Poor		Poor	
		Too clayey	0.02	Low strength	0.00	Slope	0.00
		Too acid	0.32	Slope	0.00	Too clayey	0.01
Relay	30	Fair		Poor		Poor	
		Organic matter content low	0.03	Slope	0.00	Slope	0.00
		Water erosion	0.68				
		Too acid	0.68				
MaB:							
Manor	85	Fair		Good		Poor	
		Too acid	0.50			Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
						Too acid	0.88
MaC:							
Manor	85	Fair		Good		Poor	
		Too acid	0.50			Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
						Slope	0.37
						Too acid	0.88
MaD:							
Manor	85	Fair		Fair		Poor	
		Too acid	0.50	Slope	0.50	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
						Too acid	0.88
McD:							
Manor	85	Fair		Fair		Poor	
		Too acid	0.50	Slope	0.50	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
						Too acid	0.88
MgD:							
Manor	55	Fair		Fair		Poor	
		Too acid	0.50	Slope	0.50	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
						Slope	0.00
						Too acid	0.88
Bannertown	35	Fair		Poor		Poor	
		Droughty	0.04	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.40	Slope	0.50	Rock fragments	0.50
		Too acid	0.50			Depth to bedrock	0.54
		Depth to bedrock	0.54			Too acid	0.88

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
MgF:							
Manor	55	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
						Too acid	0.88
Bannertown	35	Fair		Poor		Poor	
		Droughty	0.04	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.40	Slope	0.00	Rock fragments	0.50
		Too acid	0.50			Depth to bedrock	0.54
		Depth to bedrock	0.54			Too acid	0.88
MkF:							
Manor	55	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.00
						Too acid	0.88
Brinklow	30	Fair		Poor		Poor	
		Organic matter content low	0.29	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.54	Low strength	0.78	Depth to bedrock	0.54
		Droughty	0.65	Shrink-swell	0.99	Too acid	0.88
MoB:							
Mount Lucas	85	Fair		Fair		Fair	
		Organic matter content low	0.50	Wetness depth	0.29	Wetness depth	0.29
		Too acid	0.84				
MoC:							
Mount Lucas	85	Fair		Fair		Fair	
		Organic matter content low	0.50	Wetness depth	0.29	Wetness depth	0.29
		Too acid	0.84			Slope	0.37
OcB:							
Occoquan	85	Fair		Fair		Fair	
		Organic matter content low	0.18	Depth to bedrock	0.92	Rock fragments	0.88
		Too acid	0.50			Too acid	0.88
OcC:							
Occoquan	85	Fair		Fair		Fair	
		Organic matter content low	0.18	Depth to bedrock	0.92	Slope	0.37
		Too acid	0.50			Rock fragments	0.88
						Too acid	0.88
PfC:							
Patapsco	50	Poor		Good		Poor	
		Too sandy	0.00			Too sandy	0.00
		Wind erosion	0.00			Too acid	0.88
		Organic matter content low	0.08				
		Too acid	0.32				
		Droughty	0.97				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
PfC:							
Fort Mott-----------	40	Poor		Good		Fair	
		Wind erosion	0.00			Too sandy	0.08
		Organic matter content low	0.02				
		Too sandy	0.08				
		Too acid	0.50				
RsB:							
Russett-------------	85	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
RsC:							
Russett-------------	85	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
RsD:							
Russett-------------	85	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Slope	0.16
		Organic matter content low	0.11	Low strength	0.78	Too acid	0.41
						Wetness depth	0.53
		Water erosion	0.99				
RtB:							
Russett-------------	50	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
Alloway-------------	30	Poor		Poor		Poor	
		Too acid	0.00	Low strength	0.00	Too clayey	0.00
		Too clayey	0.00	Wetness depth	0.53	Too acid	0.18
		Organic matter content low	0.19	Shrink-swell	0.99	Wetness depth	0.53
		Water erosion	0.68				
Hambrook------------	20	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.32				
RtC:							
Russett-------------	50	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
Alloway-------------	30	Poor		Poor		Poor	
		Too acid	0.00	Low strength	0.00	Too clayey	0.00
		Too clayey	0.00	Wetness depth	0.53	Too acid	0.18
		Organic matter content low	0.19	Shrink-swell	0.99	Wetness depth	0.53
		Water erosion	0.68				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
RtC:							
Hambrook------------	20	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.32				
RtD:							
Russett-------------	60	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Slope	0.16
		Organic matter content low	0.11	Low strength	0.78	Too acid	0.41
						Wetness depth	0.53
		Water erosion	0.99				
Alloway-------------	25	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Too acid	0.00	Wetness depth	0.53	Too acid	0.18
		Organic matter content low	0.19	Shrink-swell	0.99	Slope	0.37
						Wetness depth	0.53
		Water erosion	0.68				
Hambrook------------	15	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.37
		Too acid	0.32				
RuB:							
Russett-------------	50	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
Beltsville----------	35	Fair		Poor		Fair	
		Too acid	0.01	Depth to cemented pan	0.00	Depth to cemented pan	0.05
		Depth to cemented pan	0.05	Wetness depth	0.53	Too acid	0.32
		Organic matter content low	0.12			Wetness depth	0.53
		Droughty	0.65				
		Water erosion	0.68				
RuC:							
Russett-------------	55	Poor		Fair		Fair	
		Too acid	0.00	Wetness depth	0.53	Too acid	0.41
		Organic matter content low	0.11	Low strength	0.78	Wetness depth	0.53
		Water erosion	0.99				
Beltsville----------	30	Fair		Poor		Fair	
		Too acid	0.01	Depth to cemented pan	0.00	Depth to cemented pan	0.05
		Depth to cemented pan	0.05	Wetness depth	0.53	Too acid	0.32
		Organic matter content low	0.12			Wetness depth	0.53
		Droughty	0.65				
		Water erosion	0.68				
SaB:							
Sassafras-----------	85	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
		Water erosion	0.99				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
SaC:							
Sassafras	85	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
SfB:							
Sassafras	85	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
SrC:							
Sassafras	55	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
		Water erosion	0.99				
Croom	35	Fair		Good		Poor	
		Too acid	0.05			Hard to reclaim (rock fragments)	0.00
		Organic matter content low	0.08			Rock fragments	0.00
		Droughty	0.42			Too clayey	0.40
		Too clayey	0.71			Too acid	0.76
		Water erosion	0.99				
SrD:							
Sassafras	50	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.16
		Too acid	0.50				
		Water erosion	0.99				
Croom	35	Fair		Good		Poor	
		Too acid	0.05			Rock fragments	0.00
		Organic matter content low	0.08			Hard to reclaim (rock fragments)	0.00
		Droughty	0.42			Slope	0.16
		Too clayey	0.71			Too clayey	0.40
		Water erosion	0.99			Too acid	0.76
SrE:							
Sassafras	60	Fair		Fair		Poor	
		Organic matter content low	0.02	Slope	0.50	Slope	0.00
		Too acid	0.50				
Croom	30	Fair		Fair		Poor	
		Too acid	0.05	Slope	0.50	Rock fragments	0.00
		Organic matter content low	0.08			Hard to reclaim (rock fragments)	0.00
		Droughty	0.42			Slope	0.00
		Too clayey	0.71			Too clayey	0.40
		Water erosion	0.99			Too acid	0.76
UaF:							
Udorthents	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents	100	Not rated		Not rated		Not rated	

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
UcB:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Fair		Good		Poor	
		Organic matter content low	0.02			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Too acid	0.88
		Water erosion	0.99				
Beltsville	15	Fair		Poor		Fair	
		Too acid	0.01	Depth to cemented pan	0.00	Depth to cemented pan	0.05
		Depth to cemented pan	0.05	Wetness depth	0.53	Too acid	0.32
		Organic matter content low	0.12			Wetness depth	0.53
		Droughty	0.65				
		Water erosion	0.68				
UcD:							
Urban land	45	Not rated		Not rated		Not rated	
Chillum	35	Fair		Good		Poor	
		Organic matter content low	0.02			Hard to reclaim (rock fragments)	0.00
		Too acid	0.50			Slope	0.84
		Water erosion	0.99			Too acid	0.88
Beltsville	15	Fair		Poor		Fair	
		Too acid	0.01	Depth to cemented pan	0.00	Depth to cemented pan	0.05
		Depth to cemented pan	0.05	Wetness depth	0.53	Too acid	0.32
		Organic matter content low	0.12			Wetness depth	0.53
		Droughty	0.65			Slope	0.84
		Water erosion	0.68				
UdB:							
Udorthents	90	Fair		Fair		Fair	
		Too acid	0.50	Shrink-swell	0.87	Too acid	0.76
UfA:							
Urban land	50	Not rated		Not rated		Not rated	
Fallsington, undrained	30	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.46			Too acid	0.98
UoE:							
Udorthents	100	Not rated		Not rated		Not rated	
Ur:							
Urban land	85	Not rated		Not rated		Not rated	
UsB:							
Urban land	50	Not rated		Not rated		Not rated	

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
UsB:							
Sassafras----------	30	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
		Water erosion	0.99				
Beltsville----------	15	Fair		Poor		Fair	
		Too acid	0.01	Depth to cemented pan	0.00	Depth to cemented pan	0.05
		Depth to cemented pan	0.05	Wetness depth	0.53	Too acid	0.32
		Organic matter content low	0.12			Wetness depth	0.53
		Droughty	0.65				
		Water erosion	0.68				
UsD:							
Urban land----------	50	Not rated		Not rated		Not rated	
Sassafras----------	30	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.84
		Too acid	0.50				
		Water erosion	0.99				
Beltsville----------	15	Fair		Poor		Fair	
		Too acid	0.01	Depth to cemented pan	0.00	Depth to cemented pan	0.05
		Depth to cemented pan	0.05	Wetness depth	0.53	Too acid	0.32
		Organic matter content low	0.12			Wetness depth	0.53
		Droughty	0.65			Slope	0.84
		Water erosion	0.68				
UtD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Fair		Fair		Fair	
		Too acid	0.50	Shrink-swell	0.87	Too acid	0.76
UuB:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Fair		Poor		Good	
		Too acid	0.84	Low strength	0.00		
		Water erosion	0.99	Depth to bedrock	0.58		
				Shrink-swell	0.99		
UuD:							
Urban land----------	60	Not rated		Not rated		Not rated	
Udorthents----------	40	Fair		Poor		Poor	
		Too acid	0.84	Low strength	0.00	Slope	0.00
		Water erosion	0.99	Depth to bedrock	0.58		
				Slope	0.98		
				Shrink-swell	0.99		
UwC:							
Urban land----------	50	Not rated		Not rated		Not rated	

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
UwC:							
Woodstown-----------	25	Fair		Fair		Fair	
		Organic matter content low	0.02	Wetness depth	0.53	Wetness depth	0.53
		Too acid	0.32				
Sassafras-----------	20	Fair		Good		Good	
		Organic matter content low	0.02				
		Too acid	0.50				
		Water erosion	0.99				
WaA:							
Watchung------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Wetness depth	0.00
		Organic matter content low	0.30	Wetness depth	0.00	Too clayey	0.00
				Shrink-swell	0.92		
		Water erosion	0.37				
		Too acid	0.84				
WcB:							
Watchung------------	85	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.30	Wetness depth	0.00	Wetness depth	0.00
				Shrink-swell	0.92		
		Water erosion	0.37				
		Too acid	0.84				
WgB:							
Wheaton-------------	60	Fair		Good		Fair	
		Organic matter content low	0.12			Rock fragments	0.12
						Too acid	0.98
		Too acid	0.54				
Glenelg-------------	40	Fair		Good		Good	
		Too acid	0.68				
		Water erosion	0.99				
WgD:							
Wheaton-------------	60	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.98	Slope	0.00
						Rock fragments	0.12
		Too acid	0.54			Too acid	0.98
Glenelg-------------	40	Fair		Fair		Poor	
		Too acid	0.68	Slope	0.98	Slope	0.00
		Water erosion	0.99				
WhA:							
Wiltshire-----------	85	Fair		Poor		Fair	
		Depth to cemented pan	0.46	Depth to cemented pan	0.00	Depth to cemented pan	0.46
		Droughty	0.53	Wetness depth	0.76	Wetness depth	0.76
		Organic matter content low	0.60				
		Water erosion	0.68				
		Too acid	0.99				

Table 15b.--Construction Materials (Part 2)--Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
WhB:							
Wiltshire	85	Fair		Poor		Fair	
		Depth to cemented pan	0.46	Depth to cemented pan	0.00	Depth to cemented pan	0.46
		Droughty	0.53	Wetness depth	0.76	Wetness depth	0.76
		Organic matter content low	0.60				
		Water erosion	0.68				
		Too acid	0.99				
WoA:							
Woodstown	85	Fair		Fair		Fair	
		Organic matter content low	0.08	Wetness depth	0.53	Wetness depth	0.53
		Too acid	0.50				
WoB:							
Woodstown	85	Fair		Fair		Fair	
		Organic matter content low	0.08	Wetness depth	0.53	Wetness depth	0.53
		Too acid	0.50				
ZbA:							
Zekiah	50	Fair		Poor		Poor	
		Too acid	0.08	Wetness depth	0.00	Wetness depth	0.00
		Water erosion	0.37			Too acid	0.50
		Organic matter content low	0.50				
Issue	40	Fair		Poor		Poor	
		Too acid	0.08	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.92			Too acid	0.82
		Water erosion	0.99				

Table 16.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
AwB:							
Alloway-------------	85	Not limited		Very limited		Very limited	
				Depth to saturated zone	0.99	Slow refill	1.00
				Piping	0.39	Cutbanks cave	0.10
						Depth to saturated zone	0.01
BaA:							
Baile---------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Ponding	1.00	Slow refill	0.97
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	1.00		
BeA:							
Benevola------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Depth to water	1.00
BeB:							
Benevola------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Depth to water	1.00
BeC:							
Benevola------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.04			Depth to water	1.00
		Slope	0.01				
BrC:							
Brinklow------------	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.59	Thin layer	0.86	Depth to water	1.00
		Seepage	0.03	Piping	0.67		
		Slope	0.01				
BrD:							
Brinklow------------	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.59	Thin layer	0.86	Depth to water	1.00
		Slope	0.12	Piping	0.67		
		Seepage	0.03				
BtF:							
Brinklow------------	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.59	Piping	0.67		
		Seepage	0.03				
Blocktown-----------	40	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.99	Thin layer	1.00	Depth to water	1.00
		Slope	0.97				
CeB:							
Chillum-------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00
CeC:							
Chillum-------------	85	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
ChB:							
Chillum	55	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00
Russett	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
						Cutbanks cave	0.10
				Piping	0.19	Depth to saturated zone	0.01
ChC:							
Chillum	55	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00
Russett	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
						Cutbanks cave	0.10
				Piping	0.19	Depth to saturated zone	0.01
Co:							
Codorus	50	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.99	Slow refill	0.30
						Depth to saturated zone	0.01
Hatboro	35	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	0.91		
				Seepage	0.01		
Cp:							
Codorus, frequently flooded	50	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Piping	1.00	Cutbanks cave	0.10
				Depth to saturated zone	0.99	Depth to saturated zone	0.01
Hatboro, frequently flooded	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.72	Depth to saturated zone	1.00	Slow refill	0.28
						Cutbanks cave	0.10
CrD:							
Croom	55	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.99	Seepage	0.80	Depth to water	1.00
		Slope	0.01				
Evesboro	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.90	Depth to water	1.00
		Slope	0.01				
DhB:							
Downer	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.31	Depth to water	1.00
Hammonton	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
				Seepage	0.76	Depth to saturated zone	0.01

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
DhC:							
Downer	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.31	Depth to water	1.00
Hammonton	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
				Seepage	0.99	Depth to saturated zone	0.01
DhD:							
Downer	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.31	Depth to water	1.00
		Slope	0.01				
Hammonton	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
		Slope	0.01	Seepage	0.99	Depth to saturated zone	0.01
DxC:							
Downer	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.31	Depth to water	1.00
Phalanx	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
				Thin layer	0.99		
EaB:							
Elioak	85	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.84	Depth to water	1.00
EbC:							
Evesboro	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.90	Depth to water	1.00
Fa:							
Fallsington, undrained	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Ponding	1.00		
				Seepage	0.50		
GaC:							
Gaila	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.01				
GaD:							
Gaila	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.12				
GbA:							
Gladstone	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
GbB:							
Gladstone	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
GbC:							
Gladstone-----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
		Slope	0.01				
GcB:							
Gladstone-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
Legore--------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
				Seepage	0.04		
GcC:							
Gladstone-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
		Slope	0.01				
Legore--------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
GdC:							
Gladstone-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
		Slope	0.01				
Legore--------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
GdD:							
Gladstone-----------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
		Slope	0.12				
Legore--------------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.12	Seepage	0.04		
GfB:							
Gladstone-----------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
Urban land----------	40	Not limited		Not rated		Not rated	
GfC:							
Gladstone-----------	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
		Slope	0.01				
Urban land----------	40	Somewhat limited		Not rated		Not rated	
		Slope	0.01				
GgA:							
Glenelg-------------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Seepage	0.04		
GgB:							
Glenelg-------------	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Seepage	0.04		

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
GgC:							
Glenelg	85	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
GhB:							
Glenelg	45	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Seepage	0.04		
Urban land	35	Not limited		Not rated		Not rated	
GhC:							
Glenelg	45	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
Urban land	30	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
GmA:							
Glenville	85	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.86	Piping	1.00	Depth to water	1.00
				Thin layer	0.86		
		Seepage	0.53	Depth to saturated zone	0.86		
GmB:							
Glenville	85	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.86	Piping	1.00	Depth to water	1.00
				Thin layer	0.86		
		Seepage	0.53	Depth to saturated zone	0.86		
GmC:							
Glenville	85	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.86	Piping	1.00	Depth to water	1.00
				Thin layer	0.86		
		Seepage	0.53	Depth to saturated zone	0.86		
		Slope	0.01				
GnB:							
Glenville	50	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.86	Piping	1.00	Depth to water	1.00
				Thin layer	0.86		
		Seepage	0.53	Depth to saturated zone	0.86		
Baile	35	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Ponding	1.00	Slow refill	0.97
				Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	1.00		
GoB:							
Glenville	60	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.86	Piping	1.00	Depth to water	1.00
				Thin layer	0.86		
		Seepage	0.53	Depth to saturated zone	0.86		

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
GoB:							
Codorus	35	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.99	Slow refill	0.30
						Depth to saturated zone	0.01
GuB:							
Glenville	45	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.86	Piping	1.00	Depth to water	1.00
		Seepage	0.53	Thin layer	0.86		
				Depth to saturated zone	0.86		
Urban land	35	Not limited		Not rated		Not rated	
Udorthents	20	Somewhat limited		Somewhat limited		Very limited	
		Depth to bedrock	0.01	Piping	0.91	Depth to water	1.00
				Thin layer	0.46		
Ha:							
Hatboro	60	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Ponding	1.00	Cutbanks cave	0.10
				Depth to saturated zone	1.00		
				Piping	0.91		
				Seepage	0.01		
Codorus	35	Somewhat limited		Very limited		Very limited	
		Seepage	0.70	Piping	1.00	Cutbanks cave	1.00
				Depth to saturated zone	0.99	Slow refill	0.30
						Depth to saturated zone	0.01
JaB:							
Jackland	85	Not limited		Very limited		Very limited	
				Depth to saturated zone	1.00	Depth to water	1.00
LaB:							
Legore	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
				Seepage	0.04		
LaC:							
Legore	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
LeB:							
Legore	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
				Seepage	0.04		
LeC:							
Legore	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
LmB:							
Legore	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
				Seepage	0.04		

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
LmB:							
Montalto------------	30	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
LoB:							
Legore--------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
				Seepage	0.04		
Montalto------------	35	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
Urban land----------	20	Not limited		Not rated		Not rated	
LoC:							
Legore--------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.01	Seepage	0.04		
Montalto------------	30	Somewhat limited		Not limited		Very limited	
		Seepage	0.70			Depth to water	1.00
		Slope	0.01				
Urban land----------	20	Somewhat limited		Not rated		Not rated	
		Slope	0.01				
LrD:							
Legore--------------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.12	Seepage	0.04		
Relay---------------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.12	Seepage	0.09		
LrF:							
Legore--------------	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.50	Depth to water	1.00
		Slope	0.97	Seepage	0.04		
Relay---------------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.97	Seepage	0.09		
MaB:							
Manor---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
MaC:							
Manor---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.01				
MaD:							
Manor---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.12				
McD:							
Manor---------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.12				

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
MgD:							
Manor	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.12				
Bannertown	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.86	Seepage	0.06		
		Slope	0.12				
MgF:							
Manor	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.97				
Bannertown	35	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.86	Depth to water	1.00
		Slope	0.97	Seepage	0.06		
		Depth to bedrock	0.86				
MkF:							
Manor	55	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.04	Depth to water	1.00
		Slope	0.94				
Brinklow	30	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.97	Thin layer	0.86	Depth to water	1.00
		Depth to bedrock	0.59	Piping	0.67		
		Seepage	0.03				
MoB:							
Mount Lucas	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Piping	1.00		
MoC:							
Mount Lucas	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Slope	0.01				
				Piping	1.00		
OcB:							
Occoquan	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.02		
OcC:							
Occoquan	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	0.01	Thin layer	0.02		
		Depth to bedrock	0.01				
PfC:							
Patapsco	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.42	Cutbanks cave	1.00
				Depth to saturated zone	0.02	Depth to saturated zone	0.68
Fort Mott	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
RsB:							
Russett-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
				Piping	0.18	Cutbanks cave	0.10
						Depth to saturated zone	0.01
RsC:							
Russett-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
				Piping	0.18	Cutbanks cave	0.10
						Depth to saturated zone	0.01
RsD:							
Russett-------------	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
		Slope	0.01	Piping	0.18	Cutbanks cave	0.10
						Depth to saturated zone	0.01
RtB:							
Russett-------------	50	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
				Piping	0.19	Cutbanks cave	0.10
						Depth to saturated zone	0.01
Alloway-------------	30	Not limited		Very limited		Very limited	
				Depth to saturated zone	0.99	Slow refill	1.00
				Piping	0.39	Cutbanks cave	0.10
						Depth to saturated zone	0.01
Hambrook------------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Cutbanks cave	1.00
				Depth to saturated zone	0.02	Depth to saturated zone	0.68
RtC:							
Russett-------------	50	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
				Piping	0.18	Cutbanks cave	0.10
						Depth to saturated zone	0.01
Alloway-------------	30	Not limited		Very limited		Very limited	
				Depth to saturated zone	0.99	Slow refill	1.00
				Piping	0.39	Cutbanks cave	0.10
						Depth to saturated zone	0.01
Hambrook------------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.08	Cutbanks cave	1.00
				Depth to saturated zone	0.02	Depth to saturated zone	0.68
RtD:							
Russett-------------	60	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.02	Depth to saturated zone	0.99	Slow refill	0.98
		Slope	0.01	Piping	0.18	Cutbanks cave	0.10
						Depth to saturated zone	0.01

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
RtD:							
Alloway-------------	25	Somewhat limited Slope	 0.01	Very limited Depth to saturated zone Piping	 0.99 0.39	Very limited Slow refill Cutbanks cave Depth to saturated zone	 1.00 0.10 0.01
Hambrook------------	15	Very limited Seepage Slope	 1.00 0.01	Somewhat limited Seepage Depth to saturated zone	 0.08 0.02	Very limited Cutbanks cave Depth to saturated zone	 1.00 0.68
RuB:							
Russett-------------	50	Somewhat limited Seepage	 0.02	Very limited Depth to saturated zone Piping	 0.99 0.18	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	 0.98 0.10 0.01
Beltsville----------	35	Somewhat limited Depth to cemented pan Seepage	 0.99 0.95	Very limited Piping Depth to saturated zone Thin layer Seepage	 1.00 0.99 0.99 0.23	Very limited Depth to water	 1.00
RuC:							
Russett-------------	55	Somewhat limited Seepage	 0.02	Very limited Depth to saturated zone Piping	 0.99 0.18	Somewhat limited Slow refill Cutbanks cave Depth to saturated zone	 0.98 0.10 0.01
Beltsville----------	30	Somewhat limited Depth to cemented pan Seepage	 0.99 0.95	Very limited Piping Depth to saturated zone Thin layer Seepage	 1.00 0.99 0.99 0.23	Very limited Depth to water	 1.00
SaB:							
Sassafras-----------	85	Very limited Seepage	 1.00	Somewhat limited Seepage	 0.12	Very limited Depth to water	 1.00
SaC:							
Sassafras-----------	85	Very limited Seepage	 1.00	Somewhat limited Seepage	 0.12	Very limited Depth to water	 1.00
SfB:							
Sassafras-----------	85	Very limited Seepage	 1.00	Somewhat limited Seepage	 0.12	Very limited Depth to water	 1.00
SrC:							
Sassafras-----------	55	Very limited Seepage	 1.00	Somewhat limited Seepage	 0.12	Very limited Depth to water	 1.00
Croom---------------	35	Somewhat limited Seepage	 0.99	Somewhat limited Seepage	 0.80	Very limited Depth to water	 1.00
SrD:							
Sassafras-----------	50	Very limited Seepage Slope	 1.00 0.01	Somewhat limited Seepage	 0.12	Very limited Depth to water	 1.00

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
SrD:							
Croom----------------	35	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.99	Seepage	0.80	Depth to water	1.00
		Slope	0.01				
SrE:							
Sassafras------------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
		Slope	0.12				
Croom----------------	30	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.99	Seepage	0.80	Depth to water	1.00
		Slope	0.12				
UaF:							
Udorthents-----------	100	Not rated		Not rated		Not rated	
UbF:							
Udorthents-----------	100	Not rated		Not rated		Not rated	
UcB:							
Urban land-----------	45	Not limited		Not rated		Not rated	
Chillum--------------	35	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00
Beltsville-----------	15	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.99	Piping	1.00	Depth to water	1.00
		Seepage	0.95	Depth to saturated zone	0.99		
				Thin layer	0.99		
				Seepage	0.23		
UcD:							
Urban land-----------	45	Not limited		Not rated		Not rated	
Chillum--------------	35	Somewhat limited		Not limited		Very limited	
		Seepage	0.57			Depth to water	1.00
Beltsville-----------	15	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.99	Piping	1.00	Depth to water	1.00
		Seepage	0.95	Depth to saturated zone	0.99		
				Thin layer	0.99		
				Seepage	0.23		
UdB:							
Udorthents-----------	90	Somewhat limited		Very limited		Very limited	
		Seepage	0.02	Piping	1.00	Depth to water	1.00
				Seepage	0.03	Slow refill	0.98
UfA:							
Urban land-----------	50	Not limited		Not rated		Not rated	
Fallsington, undrained-----------	30	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Ponding	1.00		
				Seepage	0.50		

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
UoE:							
Udorthents----------	100	Not rated		Not rated		Not rated	
Ur:							
Urban land----------	85	Not limited		Not rated		Not rated	
UsB:							
Urban land----------	50	Not limited		Not rated		Not rated	
Sassafras-----------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
Beltsville----------	15	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.99	Piping	1.00	Depth to water	1.00
		Seepage	0.95	Depth to saturated zone	0.99		
				Thin layer	0.99		
				Seepage	0.23		
UsD:							
Urban land----------	50	Not limited		Not rated		Not rated	
Sassafras-----------	30	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
Beltsville----------	15	Somewhat limited		Very limited		Very limited	
		Depth to cemented pan	0.99	Piping	1.00	Depth to water	1.00
		Seepage	0.95	Depth to saturated zone	0.99		
				Thin layer	0.99		
				Seepage	0.23		
UtD:							
Urban land----------	60	Not limited		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.02	Piping	1.00	Depth to water	1.00
				Seepage	0.03	Slow refill	0.98
UuB:							
Urban land----------	60	Not limited		Not rated		Not rated	
Udorthents----------	40	Somewhat limited		Very limited		Very limited	
		Depth to bedrock	0.01	Piping	1.00	Depth to water	1.00
				Thin layer	0.11		
UuD:							
Urban land----------	60	Somewhat limited		Not rated		Not rated	
		Slope	0.04				
Udorthents----------	40	Somewhat limited		Very limited		Very limited	
		Slope	0.04	Piping	1.00	Depth to water	1.00
		Depth to bedrock	0.01	Thin layer	0.11		
UwC:							
Urban land----------	50	Not limited		Not rated		Not rated	

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
UwC:							
Woodstown	25	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
				Seepage	0.10	Depth to saturated zone	0.01
Sassafras	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
WaA:							
Watchung	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.45	Depth to saturated zone	1.00	Slow refill	0.55
				Piping	0.30	Cutbanks cave	0.10
WcB:							
Watchung	85	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.45	Depth to saturated zone	1.00	Slow refill	0.55
				Piping	0.30	Cutbanks cave	0.10
WgB:							
Wheaton	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Depth to water	1.00
Glenelg	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
				Seepage	0.04		
WgD:							
Wheaton	60	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Piping	0.50	Depth to water	1.00
		Slope	0.04				
Glenelg	40	Somewhat limited		Very limited		Very limited	
		Seepage	0.72	Piping	1.00	Depth to water	1.00
		Slope	0.04	Seepage	0.04		
WhA:							
Wiltshire	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.88	Depth to saturated zone	0.95	Depth to water	1.00
		Seepage	0.72	Thin layer	0.88		
				Piping	0.80		
WhB:							
Wiltshire	85	Somewhat limited		Somewhat limited		Very limited	
		Depth to cemented pan	0.88	Depth to saturated zone	0.95	Depth to water	1.00
		Seepage	0.72	Thin layer	0.88		
				Piping	0.80		
WoA:							
Woodstown	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
				Seepage	0.17	Depth to saturated zone	0.01

Table 16.--Water Management--Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
WoB:							
Woodstown-----------	85	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	0.99	Cutbanks cave	1.00
				Seepage	0.17	Depth to saturated zone	0.01
ZbA:							
Zekiah--------------	50	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.50		
Issue---------------	40	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	0.10
				Piping	1.00		

Table 17.--Engineering Index Properties

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
AwB:												
Alloway---------	0-3	Silt loam	ML	A-4	0	0	97-100	97-100	89-99	64-88	10-25	NP-10
	3-8	Loam, silt loam		A-4	0	0	98-100	97-100	90-100	65-90	10-30	NP-10
	8-20	Silt loam, silty clay loam, silty clay	CL, CH	A-7-6, A-4, A-6	0	0	89-100	74-100	58-100	50-100	20-60	5-25
	20-33	Silty clay, silty clay loam, clay	CL-ML, CH, CL	A-6, A-4, A-7-5	0	0	89-100	74-100	48-100	46-100	20-65	5-30
	33-49	Silty clay, silty clay loam, clay	CL, CH, MH	A-6, A-4, A-7-5	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	49-71	Clay, silty clay, silty clay loam	CL, CH, MH	A-7-5, A-4, A-6	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	71-75	Silty clay, silt loam, silty clay loam	CL, CL-ML, CH	A-6, A-7-5, A-4	0	0	89-100	74-100	64-100	59-100	20-60	5-25
BaA:												
Baile-----------	0-9	Silt loam, loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	9-32	Silty clay loam, silt loam, clay loam	CL	A-6	0	0	90-100	80-100	70-100	55-95	28-34	11-14
	32-65	Loam, sandy loam, silt loam	CL, ML, SC, SM	A-2, A-4, A-6	0	0	80-100	80-100	50-100	25-90	15-35	NP-11
BeA:												
Benevola--------	0-8	Silt loam, loam, silty clay loam	CL	A-6	0	0	85-100	85-100	80-95	75-90	29-36	10-14
	8-33	Clay, clay loam, silty clay loam	MH, CL, CH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	33-57	Clay, silty clay, silty clay loam	CH, CL, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	57-115	Clay, silty clay, silty clay loam	CH, CL, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
BeB:												
Benevola--------	0-8	Silt loam, loam, silty clay loam	CL	A-6	0	0	85-100	85-100	80-95	75-90	29-36	10-14
	8-33	Clay, clay loam, silty clay loam	CH, CL, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	33-57	Clay, silty clay, silty clay loam	CH, CL, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	57-115	Clay, silty clay, silty clay loam	CH, CL, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
BeC:												
Benevola--------	0-8	Silt loam, loam, silty clay loam	CL	A-6	0	0	85-100	85-100	80-95	75-90	29-36	10-14
	8-33	Clay, clay loam, silty clay loam	MH, CL, CH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	33-57	Clay, silty clay, silty clay loam	MH, CL, CH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	57-115	Clay, silty clay, silty clay loam	CL, CH, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
BrC:												
Brinklow--------	0-10	Channery silt loam, channery loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	10-25	Channery loam, channery clay loam, channery silt loam	CL, GC, GC-GM	A-6, A-7	0	0	60-95	50-90	50-85	35-70	25-50	10-25
	25-35	Bedrock			0	0	---	---	---	---	---	---
	35-39	Bedrock			0	0	---	---	---	---	---	---
BrD:												
Brinklow--------	0-10	Channery silt loam, channery loam	ML, MH	A-7, A-6, A-4	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	10-25	Channery loam, channery clay loam, channery silt loam	GC, CL, GC-GM	A-6, A-7	0	0	60-95	50-90	50-85	35-70	25-50	10-25
	25-35	Bedrock			0	0	---	---	---	---	---	---
	35-39	Bedrock			0	0	---	---	---	---	---	---
BtF:												
Brinklow--------	0-10	Channery silt loam, channery loam	ML, MH	A-7, A-6, A-4	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	10-25	Channery loam, channery clay loam, channery silt loam	CL, GC, GC-GM	A-7, A-6	0	0	60-95	50-90	50-85	35-70	25-50	10-25
	25-35	Bedrock			0	0	---	---	---	---	---	---
	35-39	Bedrock			0	0	---	---	---	---	---	---
Blocktown-------	0-6	Channery silt loam, channery loam	ML, MH	A-7, A-6, A-4	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	6-17	Extremely channery silt loam, extremely channery loam	MH, ML	A-7, A-6, A-4	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	17-21	Bedrock			0	---	---	---	---	---	---	---
	21-25	Bedrock			0	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
CeB:												
Chillum---------	0-2	Loam	CL-ML, ML, CL	A-4	0	0	100	27-100	25-100	20-100	16-28	2-10
	2-9	Gravelly loam, silt loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	9-12	Gravelly loam, silt loam, clay loam	GC, CL, CL-ML	A-6, A-2-4	0	0	40-100	40-100	35-100	35-100	23-38	6-16
	12-24	Clay loam, gravelly loam, silt loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	24-34	Loamy sand, very gravelly sandy loam, gravelly sandy loam	SM, GM, GP-GM	A-1-b, A-1-a, A-2-4	0	0	25-90	10-90	5-70	2-25	0-25	NP-8
	34-72	Gravelly silty clay loam, very gravelly clay loam, gravelly loamy sand, cemented material	GC, GM, GP-GM	A-2-6, A-1, A-2	0	0	25-100	10-85	5-70	2-60	0-38	NP-15
CeC:												
Chillum---------	0-2	Loam, silt loam	CL-ML, ML, CL	A-4	0	0	100	27-100	25-100	20-100	16-28	2-10
	2-9	Gravelly loam, silt loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	9-12	Gravelly loam, silt loam, clay loam	GC, CL, CL-ML	A-6, A-2-4	0	0	40-100	40-100	35-100	35-100	23-38	6-16
	12-24	Clay loam, gravelly loam, silt loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	24-34	Loamy sand, very gravelly sandy loam, gravelly sandy loam	SM, GM, GP-GM	A-1-b, A-1-a, A-2-4	0	0	25-90	10-90	5-70	2-25	0-25	NP-8
	34-72	Gravelly silty clay loam, very gravelly clay loam, gravelly loamy sand, cemented material	GC, GM, GP-GM	A-2-6, A-1, A-2	0	0	25-100	10-85	5-70	2-60	0-38	NP-15
ChB:												
Chillum---------	0-2	Loam, silt loam	CL-ML, ML, CL	A-4	0	0	100	27-100	25-100	20-100	16-28	2-10
	2-9	Gravelly loam, silt loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	9-12	Gravelly loam, silt loam, clay loam	GC, CL, CL-ML	A-6, A-2-4	0	0	40-100	40-100	35-100	35-100	23-38	6-16
	12-24	Clay loam, gravelly loam, silt loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	24-34	Loamy sand, very gravelly sandy loam, gravelly sandy loam	SM, GM, GP-GM	A-1-b, A-1-a, A-2-4	0	0	25-90	10-90	5-70	2-25	0-25	NP-8
	34-72	Gravelly silty clay loam, very gravelly clay loam, gravelly loamy sand, cemented material	GC, GM, GP-GM	A-2-6, A-1, A-2	0	0	25-100	10-85	5-70	2-60	0-38	NP-15

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
ChB:												
Russett---------	0-4	Fine sandy loam	CL-ML, SM	A-2-4, A-4	0	0-15	97-100	97-100	89-98	34-65	0-20	NP-5
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	15-45	NP-25
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	25-45	10-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	25-45	10-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	SC, CL, CL-ML, SC-SM	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	20-45	5-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	CL, SC-SM, SC	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	20-45	5-25
ChC:												
Chillum---------	0-2	Loam, silt loam	CL-ML, ML, CL	A-4	0	0	100	27-100	25-100	20-100	16-28	2-10
	2-9	Gravelly loam, silt loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	9-12	Gravelly loam, silt loam, clay loam	GC, CL, CL-ML	A-6, A-2-4	0	0	40-100	40-100	35-100	35-100	23-38	6-16
	12-24	Clay loam, gravelly loam, silt loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	24-34	Loamy sand, very gravelly sandy loam, gravelly sandy loam	SM, GM, GP-GM	A-1-b, A-1-a, A-2-4	0	0	25-90	10-90	5-70	2-25	0-25	NP-8
	34-72	Gravelly silty clay loam, very gravelly clay loam, gravelly loamy sand, cemented material	GC, GM, GP-GM	A-2-6, A-1, A-2	0	0	25-100	10-85	5-70	2-60	0-38	NP-15
Russett---------	0-4	Fine sandy loam	SM, CL-ML	A-2-4, A-4	0	0-15	97-100	97-100	89-98	34-65	0-20	NP-5
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	15-45	NP-25
	7-13	Loam, sandy clay loam, clay loam	SC, CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	25-45	10-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	25-45	10-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	SC, CL, SC-SM, CL-ML	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	20-45	5-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	CL, SC-SM, SC	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	20-45	5-25

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Co:												
Codorus---------	0-11	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	80-100	70-100	65-100	55-95	22-35	2-12
	11-18	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	18-40	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	40-60	Very gravelly silt loam, very gravelly sandy loam, very gravelly loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
Hatboro---------	0-11	Silt loam	CL, ML, SC, SM	A-4, A-6	0	0	95-100	90-100	70-100	40-90	22-35	2-12
	11-44	Silt loam, loam, sandy clay loam	CL-ML, ML, CL	A-4, A-6	0	0	85-100	80-100	70-95	55-85	22-35	2-12
	44-55	Silt loam, silty clay loam, clay loam	CL-ML, CL, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	55-60	Stratified gravelly sand to clay, sandy loam	SM, SC, GC, GM	A-1, A-2	0	0	50-85	45-80	45-80	15-35	15-32	NP-14
Cp:												
Codorus, frequently flooded--------	0-1	Silt loam	CL, CL-ML, SC-SM	A-4	0	0	77-100	77-100	40-99	40-90	15-30	NP-10
	1-57	Silt loam, loam	SM, CL	A-4, A-2-4	0	0	65-100	65-100	30-100	30-100	15-30	NP-10
	57-63	Loam, gravelly silt loam	SC-SM, CL, GP-GM	A-6, A-2-4, A-4	0	0	20-100	20-100	10-100	10-100	15-35	NP-15
Hatboro, frequently flooded--------	0-2	Slightly decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	2-8	Silt loam	CL, ML, CL-ML	A-4	0	0	85-100	85-100	45-85	45-85	22-35	2-12
	8-18	Loam, silt loam	CL, SM	A-4	0	0	85-100	85-100	45-85	45-85	22-35	2-12
	18-66	Sandy loam, loam, clay loam	GP-GM, SP-SM	A-2-4	0	0	10-100	10-100	5-10	5-10	22-30	2-10

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
CrD:												
Croom-----------	0-1	Loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loamy sand, gravelly sandy loam, gravelly loam	CL-ML, GM, CL	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-82	13-25	NP-8
	1-9	Loam, very gravelly sandy loam, extremely gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand, gravelly loam	CL, GM	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-84	13-30	NP-11
	9-13	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam, very gravelly silt loam, very gravelly sandy loam	GC, GW-GM, CL	A-2-6, A-1-a, A-6, A-2-4	0	0-7	16-76	13-75	10-75	6-62	16-43	3-18
	13-30	Extremely gravelly sandy clay loam, very gravelly clay loam, very gravelly sandy loam, very gravelly sandy clay loam, very gravelly loam	GW-GM, GW, GC	A-2-6, A-2-7, A-1-a	0	0-7	16-53	13-51	8-42	4-32	14-43	1-18
	30-54	Extremely gravelly sandy clay loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loam, very gravelly clay loam, very gravelly sandy clay loam	GW, GC	A-2-6, A-2-7, A-1-a	0	0-15	10-38	6-36	4-33	1-20	14-43	1-18
	54-66	Extremely gravelly sandy clay loam, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-2-4, A-1-a, A-2-6	0	0-21	10-38	6-36	3-30	1-17	0-34	NP-13
	66-80	Extremely gravelly coarse sandy loam, extremely gravelly coarse sand, very gravelly loamy coarse sand, very gravelly sand, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-1-a, A-2-4	0	0-21	10-40	6-37	3-24	1-13	0-25	NP-8

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
CrD:												
Evesboro--------	0-4	Loamy sand, sand, moderately decomposed plant material	SM, SP-SM, PT	A-2, A-3, A-8	0	0	95-100	90-100	50-85	5-30	0-26	NP-6
	4-16	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	95-100	90-100	50-85	5-30	0-23	NP-6
	16-39	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	95-100	90-100	50-85	5-30	0-23	NP-6
	39-80	Sand, loamy sand	SP-SM, SM	A-3, A-2	0	0	95-100	90-100	50-85	5-30	0-20	NP-4
DhB:												
Downer----------	0-11	Sandy loam, loamy sand	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-35	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	35-80	Loamy sand, sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2
Hammonton-------	0-11	Loamy sand, sandy loam	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-30	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	30-80	Sand, loamy sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2
DhC:												
Downer----------	0-11	Sandy loam, loamy sand	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-35	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	35-80	Loamy sand, sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2
Hammonton-------	0-11	Loamy sand, sandy loam	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-30	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	30-80	Sand, loamy sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2
DhD:												
Downer----------	0-11	Sandy loam, loamy sand	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-35	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	35-80	Loamy sand, sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2
Hammonton-------	0-11	Sandy loam, loamy sand	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-30	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	30-80	Sand, loamy sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2
DxC:												
Downer----------	0-11	Sandy loam, loamy sand	SM	A-2	0	0	90-100	85-100	50-75	15-40	16-33	1-10
	11-35	Sandy loam	SC-SM, SM	A-2	0	0	90-100	85-100	45-90	10-70	16-29	2-11
	35-80	Loamy sand, sand, gravelly sand	SM, SP-SM	A-2, A-3	0	0	80-100	60-100	30-90	5-35	0-19	NP-2

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
DxC:												
Phalanx---------	0-11	Sandy loam, loamy sand	SM	A-2-4, A-4	0	0-8	84-100	83-100	55-86	16-43	0-31	NP-10
	11-15	Sandy loam, loamy sand	SM	A-4, A-2-4, A-6	0	0-7	84-100	83-100	62-95	23-52	0-35	NP-13
	15-22	Channery sandy loam, sandy loam, sandy clay loam, channery sandy clay loam	SM, SC-SM	A-2-4, A-6	0-3	0-22	60-100	58-100	44-96	16-52	0-31	NP-13
	22-28	Sandy loam, channery sandy loam, sandy clay loam, channery sandy clay loam	SC, SC-SM	A-4, A-2-4, A-7-6	0	0-15	92-100	90-100	68-100	26-59	0-44	NP-25
	28-33	Fine sandy loam, channery sandy loam, sandy loam, channery sandy clay loam	SC, SC-SM, SM	A-2-4, A-7-6, A-4	0	0-67	50-100	48-100	37-100	12-56	0-44	NP-25
	33-38	Cemented material, extremely flaggy sandy loam, extremely flaggy sandy clay loam	GM, GP-GM	A-1-b, A-2-4	0-100	0-60	0-100	0-100	0-31	0-31	0-44	NP-25
EaB:												
Elioak----------	0-6	Silt loam	CL, ML, SC, SM	A-2-4, A-4, A-6, A-7	0	0-10	85-100	80-100	55-100	30-90	30-45	5-20
	6-15	Silty clay loam, silt loam, loam	CL	A-4, A-6	0	0	85-100	80-100	70-100	50-95	29-34	9-14
	15-42	Silty clay loam, clay loam, silty clay	CH, CL, MH, ML	A-6, A-7	0	0-5	85-100	80-100	75-100	60-95	35-58	11-26
	42-60	Silt loam, loam, gravelly fine sandy loam	ML, SM, GM	A-1-b, A-2, A-4, A-5	0	0-5	65-100	50-100	35-100	20-90	35-50	NP-10
EbC:												
Evesboro--------	0-4	Loamy sand, sand, moderately decomposed plant material	SM, SP-SM, PT	A-2, A-3, A-8	0	0	95-100	90-100	50-85	5-30	0-26	NP-6
	4-16	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	95-100	90-100	50-85	5-30	0-23	NP-6
	16-39	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	95-100	90-100	50-85	5-30	0-23	NP-6
	39-80	Sand, loamy sand	SP-SM, SM	A-3, A-2	0	0	95-100	90-100	50-85	5-30	0-20	NP-4

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Fa: Fallsington, undrained------	0-2	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	2-10	Sandy loam	CL-ML, SM	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	10-32	Sandy clay loam, loam	SC, CL-ML, CL	A-6, A-7	0	0	95-100	90-100	80-95	35-75	27-45	7-25
	32-39	Loamy sand, sandy loam, sandy clay loam	SM, SC	A-6, A-2	0	0	95-100	90-100	50-90	15-55	0-36	NP-17
	39-46	Sandy clay loam, sandy loam, loamy sand	SC, SM	A-6, A-2	0	0	93-100	90-100	50-90	15-55	0-36	NP-17
	46-80	Sand, loamy sand, sandy loam	SP-SM, SM	A-3, A-2	0	0	93-100	90-100	50-75	5-40	0-26	NP-9
GaC: Gaila-----------	0-8	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	8-17	Sandy clay loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	17-20	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	20-76	Loamy sand, sandy loam, loam	SM, SC-SM, SC, CL-ML	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
GaD: Gaila-----------	0-8	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	8-17	Sandy clay loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	17-20	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	20-76	Loamy sand, sandy loam, loam	SC, CL-ML, SM, SC-SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
GbA: Gladstone-------	0-8	Loam, sandy loam, clay loam	ML, CL-ML, SC-SM, SM, SC	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	CL, SC, SC-SM	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	SM, CL-ML, ML, SC-SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12
GbB: Gladstone-------	0-8	Loam, sandy loam, clay loam	ML, SC, SM, SC-SM, CL-ML	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	SC-SM, SC, CL	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	ML, CL-ML, SC-SM, SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
GbC:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	CL-ML, ML, SC-SM, SM, SC	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	CL, SC, SC-SM	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	SM, ML, CL-ML, SC-SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12
GcB:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	SM, SC-SM, ML, CL-ML, SC	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	CL, SC, SC-SM	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	SM, SC-SM, ML, CL-ML	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CH, CL, CL-ML	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	CL-ML, SC-SM, SM, SC	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
GcC:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	SC, ML, CL-ML, SM, SC-SM	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	SC-SM, SC, CL	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	SM, ML, CL-ML, SC-SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
GcC:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL, CH, CL-ML	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SM, SC-SM, SC, CL-ML	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
GdC:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	ML, SC-SM, SC, SM, CL-ML	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	CL, SC, SC-SM	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	CL-ML, SM, ML, SC-SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL-ML, CL, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SM, SC-SM, SC, CL-ML	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
GdD:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	SM, SC-SM, ML, CL-ML, SC	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	SC-SM, SC, CL	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
GdD:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL, CL-ML, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SM, SC-SM, SC, CL-ML	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
GfB:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	CL-ML, SC, SM, ML, SC-SM	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	CL, SC, SC-SM	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	CL-ML, ML, SC-SM, SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
GfC:												
Gladstone-------	0-8	Loam, sandy loam, clay loam	SC, ML, SM, SC-SM, CL-ML	A-1, A-2, A-4	0	0	80-90	65-85	40-80	20-65	25-39	6-13
	8-30	Clay loam, loam, sandy clay loam	SC-SM, SC, CL	A-2, A-6	0	0	80-90	65-80	50-80	25-60	29-46	12-25
	30-75	Sandy loam, sandy clay loam, loamy sand	SC-SM, ML, CL-ML, SM	A-1, A-2, A-4	0	0	75-90	60-85	40-75	20-55	16-30	2-12
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
GgA:												
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Loam, sandy loam, channery sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	SM, SC-SM, ML	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
GgB:												
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Channery sandy loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	SC-SM, ML, SM	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6
GgC:												
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Channery sandy loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	SC-SM, ML, SM	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6
GhB:												
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Channery sandy loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	ML, SM, SC-SM	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
GhC:												
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Channery sandy loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	SC-SM, ML, SM	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
GmA:												
Glenville-------	0-8	Silt loam	ML	A-4	0	0	85-100	85-100	70-95	45-80	25-35	3-10
	8-30	Loam, silt loam, gravelly silt loam	CL, CL-ML, ML	A-4, A-6	0	0	70-100	60-100	60-95	45-80	25-40	5-13
	30-40	Silt loam, loam, clay loam	SC, CL-ML, CL	A-4, A-6	0	0	65-100	60-100	55-95	45-80	25-40	5-13
	40-70	Loam, gravelly sandy loam, silt loam	CL-ML, ML, SM, SC-SM	A-4	0	0	65-100	60-100	55-95	45-80	25-35	5-10
GmB:												
Glenville-------	0-8	Silt loam	ML	A-4	0	0	85-100	85-100	70-95	45-80	25-35	3-10
	8-30	Loam, silt loam, gravelly silt loam	CL, CL-ML, ML	A-4, A-6	0	0	70-100	60-100	60-95	45-80	25-40	5-13
	30-40	Silt loam, loam, clay loam	CL-ML, CL, SC	A-4, A-6	0	0	65-100	60-100	55-95	45-80	25-40	5-13
	40-70	Loam, gravelly sandy loam, silt loam	SC-SM, CL-ML, ML, SM	A-4	0	0	65-100	60-100	55-95	45-80	25-35	5-10
GmC:												
Glenville-------	0-8	Silt loam	ML	A-4	0	0	85-100	85-100	70-95	45-80	25-35	3-10
	8-30	Loam, silt loam, gravelly silt loam	CL, ML, CL-ML	A-4, A-6	0	0	70-100	60-100	60-95	45-80	25-40	5-13
	30-40	Silt loam, loam, clay loam	SC, CL-ML, CL	A-4, A-6	0	0	65-100	60-100	55-95	45-80	25-40	5-13
	40-70	Loam, gravelly sandy loam, silt loam	SM, CL-ML, ML, SC-SM	A-4	0	0	65-100	60-100	55-95	45-80	25-35	5-10
GnB:												
Glenville-------	0-8	Silt loam	ML	A-4	0	0	85-100	85-100	70-95	45-80	25-35	3-10
	8-30	Loam, silt loam, gravelly silt loam	ML, CL-ML, CL	A-4, A-6	0	0	70-100	60-100	60-95	45-80	25-40	5-13
	30-40	Silt loam, loam, clay loam	SC, CL-ML, CL	A-4, A-6	0	0	65-100	60-100	55-95	45-80	25-40	5-13
	40-70	Loam, gravelly sandy loam, silt loam	CL-ML, SM, SC-SM, ML	A-4	0	0	65-100	60-100	55-95	45-80	25-35	5-10
Baile-----------	0-9	Silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	9-32	Silty clay loam, silt loam, clay loam	CL	A-6	0	0	90-100	80-100	70-100	55-95	28-34	11-14
	32-65	Loam, sandy loam, silt loam	SM, CL, ML, SC	A-2, A-4, A-6	0	0	80-100	80-100	50-100	25-90	15-35	NP-11

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
GoB:												
Glenville-------	0-8	Silt loam	ML	A-4	0	0	85-100	85-100	70-95	45-80	25-35	3-10
	8-30	Loam, silt loam, gravelly silt loam	ML, CL, CL-ML	A-4, A-6	0	0	70-100	60-100	60-95	45-80	25-40	5-13
	30-40	Silt loam, loam, clay loam	SC, CL-ML, CL	A-4, A-6	0	0	65-100	60-100	55-95	45-80	25-40	5-13
	40-70	Loam, gravelly sandy loam, silt loam	SC-SM, SM, ML, CL-ML	A-4	0	0	65-100	60-100	55-95	45-80	25-35	5-10
Codorus---------	0-11	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	80-100	70-100	65-100	55-95	22-35	2-12
	11-18	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	18-40	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	40-60	Very gravelly silt loam, very gravelly sandy loam, very gravelly loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
GuB:												
Glenville-------	0-8	Silt loam	ML	A-4	0	0	85-100	85-100	70-95	45-80	25-35	3-10
	8-30	Loam, silt loam, gravelly silt loam	CL, CL-ML, ML	A-4, A-6	0	0	70-100	60-100	60-95	45-80	25-40	5-13
	30-40	Silt loam, loam, clay loam	CL, CL-ML, SC	A-4, A-6	0	0	65-100	60-100	55-95	45-80	25-40	5-13
	40-70	Loam, gravelly sandy loam, silt loam	CL-ML, ML, SM, SC-SM	A-4	0	0	65-100	60-100	55-95	45-80	25-35	5-10
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Udorthents------	0-3	Loam	CL, ML, CL-ML	A-4	0	0-5	85-100	80-100	70-95	50-75	25-35	5-10
	3-40	Loam, silt loam, clay loam	ML	A-6, A-7-6	0	0-5	90-100	80-100	70-100	55-95	35-45	10-15
	40-65	Weathered bedrock			---	---	---	---	---	---	---	---
Ha:												
Hatboro---------	0-11	Silt loam	SM, SC, ML, CL	A-4, A-6	0	0	95-100	90-100	70-100	40-90	22-35	2-12
	11-44	Silt loam, loam, sandy clay loam	CL-ML, CL, ML	A-4, A-6	0	0	85-100	80-100	70-95	55-85	22-35	2-12
	44-55	Silt loam, silty clay loam, clay loam	CH, CL-ML, CL	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	55-60	Stratified gravelly sand to clay, sandy loam	SC, GC, GM, SM	A-1, A-2	0	0	50-85	45-80	45-80	15-35	15-32	NP-14

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	Percentage passing sieve number--: 10	Percentage passing sieve number--: 40	Percentage passing sieve number--: 200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
Ha:												
Codorus---------	0-11	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	80-100	70-100	65-100	55-95	22-35	2-12
	11-18	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	18-40	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	40-60	Very gravelly silt loam, very gravelly sandy loam, very gravelly loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
JaB:												
Jackland--------	0-8	Silt loam	CL	A-6	0	0-5	95-100	80-100	75-95	51-70	25-40	10-20
	8-41	Clay, silty clay, clay loam	CL, CH	A-6, A-7	0	0	99-100	80-100	70-100	55-95	35-60	20-45
	41-65	Clay loam, sandy clay loam, sandy loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	1-5	95-100	65-95	45-90	40-85	20-40	5-20
LaB:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CH, CL-ML, CL	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SM, SC-SM, SC, CL-ML	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
LaC:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL, CH, CL-ML	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	CL-ML, SM, SC-SM, SC	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
LeB:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL-ML, CL, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SC, CL-ML, SC-SM, SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
LeC:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL, CH, CL-ML	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SC, SC-SM, CL-ML, SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
LmB:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL-ML, CL, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-7, A-4, A-6	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	CL-ML, SC, SC-SM, SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
Montalto--------	0-4	Gravelly silt loam, silt loam, loam	ML, CL, CH	A-6, A-7	0	0-5	95-100	80-100	70-100	50-95	36-52	10-25
	4-8	Silt loam, loam	CL	A-6	0	0	85-100	85-100	80-95	75-90	29-36	10-14
	8-43	Clay, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	95-100	80-100	70-100	60-95	40-54	18-27
	43-72	Loam, clay loam, silty clay loam	ML, CH, MH, CL	A-6, A-7	0	0-10	90-100	80-100	70-100	50-95	38-52	13-25

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
LoB:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CH, CL-ML, CL	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	CL-ML, SC, SC-SM, SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
Montalto--------	0-4	Gravelly silt loam, silt loam, loam	CL, CH, ML	A-6, A-7	0	0-5	95-100	80-100	70-100	50-95	36-52	10-25
	4-8	Silt loam, loam	CL	A-6	0	0	85-100	85-100	80-95	75-90	29-36	10-14
	8-43	Clay, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	95-100	80-100	70-100	60-95	40-54	18-27
	43-72	Loam, clay loam, silty clay loam	MH, CH, ML, CL	A-6, A-7	0	0-10	90-100	80-100	70-100	50-95	38-52	13-25
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
LoC:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL, CL-ML, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	CL-ML, SC, SC-SM, SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
Montalto--------	0-4	Gravelly silt loam, silt loam, loam	CH, CL, ML	A-6, A-7	0	0-5	95-100	80-100	70-100	50-95	36-52	10-25
	4-8	Silt loam, loam	CL	A-6	0	0	85-100	85-100	80-95	75-90	29-36	10-14
	8-43	Clay, silty clay, silty clay loam	CH, CL	A-6, A-7	0	0-5	95-100	80-100	70-100	60-95	40-54	18-27
	43-72	Loam, clay loam, silty clay loam	CH, CL, ML, MH	A-6, A-7	0	0-10	90-100	80-100	70-100	50-95	38-52	13-25
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification Unified	Classification AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
LrD:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CH, CL, CL-ML	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SM, SC-SM, SC, CL-ML	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
Relay-----------	0-6	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	6-15	Silt loam, loam		A-4	0	0	98-100	97-100	90-100	65-90	10-30	NP-10
	15-30	Clay loam, silt loam, loam	CL	A-4, A-6	0	0-1	99-100	95-100	90-100	75-90	21-31	8-11
	30-40	Loam, sandy loam, clay loam	SC, CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	25-45	10-25
	40-65	Sandy loam, loamy sand, loam	SM	A-2	0	0	90-100	85-100	50-75	15-40	15-27	1-10
LrF:												
Legore----------	0-1	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	1-2	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	2-11	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	11-27	Silt loam, silty clay loam, clay loam	CL-ML, CL, CH	A-7-6, A-6, A-5	0	0	89-100	74-100	48-100	46-100	26-72	6-47
	27-52	Sandy loam, silt loam, loam	ML, MH	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	52-72	Loamy sand, sandy loam, loam	SC-SM, SC, CL-ML, SM	A-1, A-2, A-4	0	0	80-95	70-95	40-90	15-65	15-30	NP-10
Relay-----------	0-6	Gravelly silt loam, silt loam, loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	6-15	Loam, silt loam		A-4	0	0	98-100	97-100	90-100	65-90	10-30	NP-10
	15-30	Clay loam, loam, silt loam	CL	A-4, A-6	0	0-1	99-100	95-100	90-100	75-90	21-31	8-11
	30-40	Loam, sandy loam, clay loam	SC, CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	25-45	10-25
	40-65	Sandy loam, loamy sand, loam	SM	A-2	0	0	90-100	85-100	50-75	15-40	15-27	1-10

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
MaB:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12
MaC:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12
MaD:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12
McD:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12
MgD:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
MgD:												
Bannertown------	0-4	Sandy loam, loam, gravelly sandy loam	SM, SC-SM	A-2, A-4	0-5	0-10	85-100	50-90	30-85	15-75	25-35	NP-7
	4-11	Gravelly coarse sandy loam, sandy loam, loam	SC-SM, SM	A-4, A-2	0-5	0-10	85-100	50-90	45-85	15-75	25-35	NP-7
	11-21	Gravelly coarse sandy loam, sandy loam, loam	SC-SM, SM	A-4, A-2	0-5	0-20	85-100	50-90	45-85	15-75	25-35	NP-7
	21-34	Gravelly coarse sandy loam, gravelly sandy loam, loamy sand	SM	A-2, A-4	0-5	0-20	85-100	50-90	45-85	15-75	0-25	NP
	34+	Bedrock			---	---	---	---	---	---	---	---
MgF:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12
Bannertown------	0-4	Sandy loam, loam, gravelly sandy loam	SM, SC-SM	A-2, A-4	0-5	0-10	85-100	50-90	30-85	15-75	25-35	NP-7
	4-11	Gravelly coarse sandy loam, sandy loam, loam	SC-SM, SM	A-4, A-2	0-5	0-10	85-100	50-90	45-85	15-75	25-35	NP-7
	11-21	Gravelly coarse sandy loam, sandy loam, loam	SC-SM, SM	A-4, A-2	0-5	0-20	85-100	50-90	45-85	15-75	25-35	NP-7
	21-34	Gravelly coarse sandy loam, gravelly sandy loam, loamy sand	SM	A-2, A-4	0-5	0-20	85-100	50-90	45-85	15-75	0-25	NP
	34+	Bedrock			---	---	---	---	---	---	---	---
MkF:												
Manor-----------	0-6	Loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	6-22	Loam, sandy loam, loamy sand	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-90	26-40	4-12
	22-72	Channery sandy loam, sand, channery loamy sand	SM, CL-ML	A-4, A-2	0	0-5	60-85	50-75	30-70	15-55	0-34	NP-12
Brinklow--------	0-10	Channery silt loam, channery loam	MH, ML	A-4, A-6, A-7	0	0	85-100	80-100	70-100	50-95	33-67	7-24
	10-25	Channery loam, channery clay loam, channery silt loam	GC-GM, CL, GC	A-6, A-7	0	0	60-95	50-90	50-85	35-70	25-50	10-25
	25+	Bedrock			0	0	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
MoB:												
Mount Lucas-----	0-9	Silt loam	ML	A-4	0	0-5	95-100	80-100	75-95	60-90	0-14	NP
	9-38	Silt loam, silty clay loam, clay loam	ML, SM, GM	A-2, A-4, A-5, A-7	0	0-10	80-100	70-100	45-95	30-90	30-49	3-15
	38-60	Gravelly clay loam, sandy clay loam	ML, GM, SM, SP-SM	A-1, A-2, A-4, A-6	0	0-10	45-90	30-90	15-70	10-55	25-40	NP-11
MoC:												
Mount Lucas-----	0-9	Silt loam	ML	A-4	0	0-5	95-100	80-100	75-95	60-90	0-14	NP
	9-38	Silt loam, silty clay loam, clay loam	SM, ML, GM	A-2, A-4, A-5, A-7	0	0-10	80-100	70-100	45-95	30-90	30-49	3-15
	38-60	Gravelly clay loam, sandy clay loam	ML, SP-SM, GM, SM	A-1, A-2, A-4, A-6	0	0-10	45-90	30-90	15-70	10-55	25-40	NP-11
OcB:												
Occoquan--------	0-8	Loam, channery loam	ML, CL-ML	A-4, A-6	0	0	80-100	75-95	65-90	50-70	15-35	NP-15
	8-24	Loam, sandy loam, sandy clay loam	SC, CL	A-6	0	0	80-100	75-95	50-70	40-70	25-40	10-25
	24-59	Channery loam, sandy loam, loamy sand	SC-SM, SM, CL-ML	A-2, A-4	0	0-5	80-95	75-80	50-70	15-65	15-25	NP-10
	59-63	Bedrock			0	---	---	---	---	---	---	---
OcC:												
Occoquan--------	0-8	Loam, channery loam	ML, CL-ML	A-4, A-6	0	0	80-100	75-95	65-90	50-70	15-35	NP-15
	8-24	Loam, sandy loam, sandy clay loam	SC, CL	A-6	0	0	80-100	75-95	50-70	40-70	25-40	10-25
	24-59	Channery loam, sandy loam, loamy sand	SC-SM, CL-ML, SM	A-2, A-4	0	0-5	80-95	75-80	50-70	15-65	15-25	NP-10
	59-63	Bedrock			0	---	---	---	---	---	---	---
PfC:												
Patapsco--------	0-10	Sand, loamy sand	SW-SM, SM	A-3, A-2-4	0-2	0-3	84-100	82-100	54-76	7-15	0-25	NP-5
	10-61	Sand, loamy sand, fine sand	SM, SW-SM	A-2-4, A-3	0-3	0-2	84-100	83-100	56-82	8-22	0-20	NP-4
	61-74	Sandy loam, loamy sand, sandy clay loam	SC, SC-SM	A-2-4, A-6	0-2	0-3	88-100	75-100	54-88	19-42	18-33	4-16
	74-80	Sandy loam, loamy sand, clay loam, sandy clay loam, silty clay loam	SC, SC-SM, CL	A-6, A-2-4, A-7-6	0	0-1	81-100	78-100	52-98	30-71	18-45	4-25
Fort Mott-------	0-10	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	95-100	90-100	20-95	3-50	0-26	NP-6
	10-24	Loamy sand	SM	A-2	0	0	95-100	90-100	20-95	10-50	0-24	NP-6
	24-36	Sandy loam, sandy clay loam	SM, SC-SM, SC	A-2, A-7	0	0	90-100	90-100	20-90	15-70	18-41	3-15
	36-80	Loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	90-100	70-100	10-95	3-50	0-23	NP-6

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
RsB:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, clay loam, silty clay loam, sandy loam	SC, CL, SC-SM, CL-ML	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25
RsC:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	SC, CL, SC-SM, CL-ML	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25
RsD:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	SC, CL, SC-SM, CL-ML	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RtB:												
Russett	0-4	Fine sandy loam	CL-ML, SM	A-2-4, A-4	0	0-15	97-100	97-100	89-98	34-65	0-20	NP-5
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	15-45	NP-25
	7-13	Loam, sandy clay loam, clay loam	SC, CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	25-45	10-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	25-45	10-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	CL, SC-SM, CL-ML, SC	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	20-45	5-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	20-45	5-25
Alloway	0-3	Silt loam	ML	A-4	0	0	97-100	97-100	89-99	64-88	10-25	NP-10
	3-8	Loam, silt loam		A-4	0	0	98-100	97-100	90-100	65-90	10-30	NP-10
	8-20	Silty clay, silt loam, silty clay loam	CL, CH	A-7-6, A-4, A-6	0	0	89-100	74-100	58-100	50-100	20-60	5-25
	20-33	Silty clay loam, silty clay, clay	CL-ML, CH, CL	A-6, A-4, A-7-5	0	0	89-100	74-100	48-100	46-100	20-65	5-30
	33-49	Silty clay, clay, silty clay loam	CL, CH, MH	A-6, A-4, A-7-5	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	49-71	Silty clay loam, silty clay, clay	CL, CH, MH	A-7-5, A-4, A-6	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	71-75	Silty clay loam, silty clay, silt loam	CL, CL-ML, CH	A-6, A-7-5, A-4	0	0	89-100	74-100	64-100	59-100	20-60	5-25
Hambrook	0-10	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-34	NP-12
	10-14	Loam, sandy loam, loamy sand	CL-ML, SM	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	14-28	Loam, sandy clay loam	CL, SC, CL-ML	A-7, A-6	0	0	90-100	85-100	20-100	20-90	22-44	7-25
	28-65	Loamy sand, sandy loam, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	65-80	Silt loam, loam, fine sandy loam	CL-ML, ML	A-4	0	0	85-100	70-100	35-100	10-100	16-38	2-19

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RtC:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	CL-ML, SC, CL, SC-SM	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25
Alloway---------	0-3	Silt loam	ML	A-4	0	0	97-100	97-100	89-99	64-88	10-25	NP-10
	3-8	Silt loam, loam		A-4	0	0	98-100	97-100	90-100	65-90	10-30	NP-10
	8-20	Silt loam, silty clay loam, silty clay	CL, CH	A-7-6, A-4, A-6	0	0	89-100	74-100	58-100	50-100	20-60	5-25
	20-33	Silty clay loam, silty clay, clay	CL-ML, CH, CL	A-6, A-4, A-7-5	0	0	89-100	74-100	48-100	46-100	20-65	5-30
	33-49	Silty clay loam, clay, silty clay	CL, CH, MH	A-6, A-4, A-7-5	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	49-71	Silty clay, silty clay loam, clay	CL, CH, MH	A-7-5, A-4, A-6	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	71-75	Silt loam, silty clay, silty clay loam	CL, CL-ML, CH	A-6, A-7-5, A-4	0	0	89-100	74-100	64-100	59-100	20-60	5-25
Hambrook--------	0-10	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-34	NP-12
	10-14	Loamy sand, sandy loam, loam	CL-ML, SM	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	14-28	Loam, sandy clay loam	CL, SC, CL-ML	A-7, A-6	0	0	90-100	85-100	20-100	20-90	22-44	7-25
	28-65	Loamy sand, sandy loam, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	65-80	Silt loam, loam, fine sandy loam	CL-ML, ML	A-4	0	0	85-100	70-100	35-100	10-100	16-38	2-19

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
RtD:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	SC, CL, SC-SM, CL-ML	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC, CL, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25
Alloway---------	0-3	Silt loam	ML	A-4	0	0	97-100	97-100	89-99	64-88	10-25	NP-10
	3-8	Silt loam, loam		A-4	0	0	98-100	97-100	90-100	65-90	10-30	NP-10
	8-20	Silty clay loam, silty clay, silt loam	CL, CH	A-7-6, A-4, A-6	0	0	89-100	74-100	58-100	50-100	20-60	5-25
	20-33	Silty clay loam, silty clay, clay	CL-ML, CH, CL	A-6, A-4, A-7-5	0	0	89-100	74-100	48-100	46-100	20-65	5-30
	33-49	Silty clay loam, clay, silty clay	CL, CH, MH	A-6, A-4, A-7-5	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	49-71	Silty clay loam, clay, silty clay	CL, CH, MH	A-7-5, A-4, A-6	0	0	89-100	74-100	69-100	68-100	30-65	10-30
	71-75	Silty clay loam, silty clay, silt loam	CL, CL-ML, CH	A-6, A-7-5, A-4	0	0	89-100	74-100	64-100	59-100	20-60	5-25
Hambrook--------	0-10	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-34	NP-12
	10-14	Loam, sandy loam, loamy sand	CL-ML, SM	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	14-28	Sandy clay loam, loam	CL, SC, CL-ML	A-7, A-6	0	0	90-100	85-100	20-100	20-90	22-44	7-25
	28-65	Loamy sand, sandy loam, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	65-80	Silt loam, loam, fine sandy loam	CL-ML, ML	A-4	0	0	85-100	70-100	35-100	10-100	16-38	2-19

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
RuB:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, clay loam, silty clay loam, sandy loam	CL-ML, SC, SC-SM, CL	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	CL, SC, SC-SM	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25
Beltsville------	0-3	Silt loam	ML, CL, CL-ML	A-4	0	0	97-100	97-100	89-99	60-88	15-30	NP-10
	3-8	Silt loam, loam	ML, CL	A-4	0	0	92-100	92-100	76-100	53-85	13-30	1-10
	8-20	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	20-41	Loam, silt loam, clay loam, sandy clay loam	SC-SM, SM, CL	A-4, A-6	0	0	75-100	73-100	58-100	35-81	13-39	1-15
	41-65	Sandy clay loam, clay loam, silt loam, loam	SM, CL	A-2-4, A-1, A-7-6	0	0	54-100	50-100	28-86	15-63	16-43	2-17
	65-71	Very gravelly sandy clay loam, gravelly sandy loam, loam, clay loam, sandy clay loam, silty clay loam	SC, GW-GM	A-2-6, A-1-a, A-7-6	0	0	45-100	40-100	18-81	11-64	16-43	2-17
	71-76	Gravelly coarse sandy loam, silt loam, clay loam, loam, sandy loam	SC-SM, SC, SW-SM	A-1-b, A-7-6	0	0	64-100	61-100	23-75	9-53	12-43	NP-17
RuC:												
Russett---------	0-4	Fine sandy loam, loam, loamy fine sand	SM, ML, OH	A-4, A-2-4	0	0-15	95-100	85-100	65-95	30-70	0-65	NP-13
	4-7	Loam, sandy clay loam, fine sandy loam	CL-ML, CL, SM	A-4, A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	16-47	2-24
	7-13	Loam, sandy clay loam, clay loam	CL, SC	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-80	24-45	9-25
	13-46	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
	46-57	Sandy clay loam, silty clay loam, clay loam, sandy loam	SC-SM, CL-ML, SC, CL	A-2, A-7-6, A-6	0	0-20	90-100	80-100	60-100	25-85	22-44	7-25
	57-77	Silty clay loam, clay loam, sandy clay loam, sandy loam	SC-SM, CL, SC	A-7-6, A-2, A-6	0	0-20	90-100	80-100	60-100	25-90	22-44	7-25

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
RuC:												
Beltsville------	0-3	Silt loam	ML, CL, CL-ML	A-4	0	0	97-100	97-100	89-99	60-88	15-30	NP-10
	3-8	Silt loam, loam	ML, CL	A-4	0	0	92-100	92-100	76-100	53-85	13-30	1-10
	8-20	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	20-41	Loam, silt loam, clay loam, sandy clay loam	SC-SM, SM, CL	A-4, A-6	0	0	75-100	73-100	58-100	35-81	13-39	1-15
	41-65	Sandy clay loam, clay loam, silt loam, loam	SM, CL	A-2-4, A-1, A-7-6	0	0	54-100	50-100	28-86	15-63	16-43	2-17
	65-71	Very gravelly sandy clay loam, gravelly sandy loam, loam, clay loam, sandy clay loam, silty clay loam	SC, GW-GM	A-2-6, A-1-a, A-7-6	0	0	45-100	40-100	18-81	11-64	16-43	2-17
	71-76	Gravelly coarse sandy loam, silt loam, clay loam, loam, sandy loam	SC-SM, SC, SW-SM	A-1-b, A-7-6	0	0	64-100	61-100	23-75	9-53	12-43	NP-17
SaB:												
Sassafras-------	0-9	Loam	SM, CL-ML	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
SaC:												
Sassafras-------	0-9	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-34	NP-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
SfB:												
Sassafras-------	0-9	Gravelly sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	60-85	50-75	30-70	15-55	0-34	NP-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
SrC:												
Sassafras-------	0-9	Loam	CL-ML, SM	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
Croom-----------	0-1	Loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loamy sand, gravelly sandy loam, gravelly loam	CL-ML, GM, CL	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-82	13-25	NP-8
	1-9	Loam, very gravelly sandy loam, extremely gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand, gravelly loam	CL, GM	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-84	13-30	NP-11
	9-13	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam, very gravelly silt loam, very gravelly sandy loam	GC, GW-GM, CL	A-2-6, A-1-a, A-6, A-2-4	0	0-7	16-76	13-75	10-75	6-62	16-43	3-18
	13-30	Extremely gravelly sandy clay loam, very gravelly clay loam, very gravelly sandy loam, very gravelly sandy clay loam, very gravelly loam	GW-GM, GW, GC	A-2-6, A-2-7, A-1-a	0	0-7	16-53	13-51	8-42	4-32	14-43	1-18
	30-54	Extremely gravelly sandy clay loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loam, very gravelly clay loam, very gravelly sandy clay loam	GC, GW	A-2-6, A-2-7, A-1-a	0	0-15	10-38	6-36	4-33	1-20	14-43	1-18

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
SrC:												
Croom (con.)	54-66	Extremely gravelly sandy clay loam, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-2-4, A-1-a, A-2-6	0	0-21	10-38	6-36	3-30	1-17	0-34	NP-13
	66-80	Extremely gravelly coarse sandy loam, extremely gravelly coarse sand, very gravelly loamy coarse sand, very gravelly sand, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-1-a, A-2-4	0	0-21	10-40	6-37	3-24	1-13	0-25	NP-8
SrD:												
Sassafras	0-9	Loam	CL-ML, SM	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
Croom	0-1	Loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loamy sand, gravelly sandy loam, gravelly loam	CL-ML, GM, CL	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-82	13-25	NP-8
	1-9	Loam, very gravelly sandy loam, extremely gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand, gravelly loam	CL, GM	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-84	13-30	NP-11
	9-13	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam, very gravelly silt loam, very gravelly sandy loam	GC, GW-GM, CL	A-2-6, A-1-a, A-6, A-2-4	0	0-7	16-76	13-75	10-75	6-62	16-43	3-18

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
SrD:												
Croom (con.)----	13-30	Extremely gravelly sandy clay loam, very gravelly clay loam, very gravelly sandy loam, very gravelly sandy clay loam, very gravelly loam	GW-GM, GW, GC	A-2-6, A-2-7, A-1-a	0	0-7	16-53	13-51	8-42	4-32	14-43	1-18
	30-54	Extremely gravelly sandy clay loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loam, very gravelly clay loam, very gravelly sandy clay loam	GW, GC	A-2-6, A-2-7, A-1-a	0	0-15	10-38	6-36	4-33	1-20	14-43	1-18
	54-66	Extremely gravelly sandy clay loam, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-2-4, A-1-a, A-2-6	0	0-21	10-38	6-36	3-30	1-17	0-34	NP-13
	66-80	Extremely gravelly coarse sandy loam, extremely gravelly coarse sand, very gravelly loamy coarse sand, very gravelly sand, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-1-a, A-2-4	0	0-21	10-40	6-37	3-24	1-13	0-25	NP-8
SrE:												
Sassafras-------	0-9	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-34	NP-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
SrE:												
Croom----------	0-1	Loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loamy sand, gravelly sandy loam, gravelly loam	CL-ML, GM, CL	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-82	13-25	NP-8
	1-9	Loam, very gravelly sandy loam, extremely gravelly sandy loam, gravelly sandy loam, very gravelly loamy sand, gravelly loam	CL, GM	A-4, A-1-b, A-2-4	0	0-7	33-100	30-100	25-100	17-84	13-30	NP-11
	9-13	Very gravelly clay loam, very gravelly loam, very gravelly sandy clay loam, very gravelly silt loam, very gravelly sandy loam	GC, GW-GM, CL	A-2-6, A-1-a, A-6, A-2-4	0	0-7	16-76	13-75	10-75	6-62	16-43	3-18
	13-30	Extremely gravelly sandy clay loam, very gravelly clay loam, very gravelly sandy loam, very gravelly sandy clay loam, very gravelly loam	GW-GM, GW, GC	A-2-6, A-2-7, A-1-a	0	0-7	16-53	13-51	8-42	4-32	14-43	1-18
	30-54	Extremely gravelly sandy clay loam, very gravelly sandy loam, extremely gravelly sandy loam, very gravelly loam, very gravelly clay loam, very gravelly sandy clay loam	GW, GC	A-2-6, A-2-7, A-1-a	0	0-15	10-38	6-36	4-33	1-20	14-43	1-18
	54-66	Extremely gravelly sandy clay loam, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-2-4, A-1-a, A-2-6	0	0-21	10-38	6-36	3-30	1-17	0-34	NP-13
	66-80	Extremely gravelly coarse sandy loam, extremely gravelly coarse sand, very gravelly loamy coarse sand, very gravelly sand, very gravelly sandy loam, very gravelly loamy sand	GW, GC	A-1-a, A-2-4	0	0-21	10-40	6-37	3-24	1-13	0-25	NP-8

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
UaF:												
Udorthents	---	---	---	---	---	---	---	---	---	---	---	---
UbF:												
Udorthents	---	---	---	---	---	---	---	---	---	---	---	---
UcB:												
Urban land	---	---	---	---	---	---	---	---	---	---	---	---
Chillum	0-2	Loam, silt loam	CL-ML, ML, CL	A-4	0	0	100	27-100	25-100	20-100	16-28	2-10
	2-9	Gravelly loam, silt loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	9-12	Gravelly loam, silt loam, clay loam	GC, CL, CL-ML	A-6, A-2-4	0	0	40-100	40-100	35-100	35-100	23-38	6-16
	12-24	Clay loam, gravelly loam, silt loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	24-34	Loamy sand, very gravelly sandy loam, gravelly sandy loam	SM, GM, GP-GM	A-1-b, A-1-a, A-2-4	0	0	25-90	10-90	5-70	2-25	0-25	NP-8
	34-72	Gravelly silty clay loam, very gravelly clay loam, gravelly loamy sand, cemented material	GC, GM, GP-GM	A-2-6, A-1, A-2	0	0	25-100	10-85	5-70	2-60	0-38	NP-15
Beltsville	0-3	Silt loam	CL-ML, ML, CL	A-4	0	0	97-100	97-100	89-99	60-88	15-30	NP-10
	3-8	Silt loam, loam	ML, CL	A-4	0	0	92-100	92-100	76-100	53-85	13-30	1-10
	8-20	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	20-41	Loam, silt loam, clay loam, sandy clay loam	SC-SM, SM, CL	A-4, A-6	0	0	75-100	73-100	58-100	35-81	13-39	1-15
	41-65	Sandy clay loam, clay loam, silt loam, loam	SM, CL	A-2-4, A-1, A-7-6	0	0	54-100	50-100	28-86	15-63	16-43	2-17
	65-71	Very gravelly sandy clay loam, gravelly sandy loam, loam, clay loam, sandy clay loam, silty clay loam	SC, GW-GM	A-2-6, A-1-a, A-7-6	0	0	45-100	40-100	18-81	11-64	16-43	2-17
	71-76	Gravelly coarse sandy loam, silt loam, clay loam, loam, sandy loam	SC-SM, SC, SW-SM	A-1-b, A-7-6	0	0	64-100	61-100	23-75	9-53	12-43	NP-17
UcD:												
Urban land	---	---	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
UcD:												
Chillum---------	0-2	Loam, silt loam	CL-ML, ML, CL	A-4	0	0	100	27-100	25-100	20-100	16-28	2-10
	2-9	Gravelly loam, silt loam	GC-GM, CL-ML, ML	A-4	0	0	50-100	27-100	25-100	15-100	15-25	2-8
	9-12	Gravelly loam, silt loam, clay loam	GC, CL, CL-ML	A-6, A-2-4	0	0	40-100	40-100	35-100	35-100	23-38	6-16
	12-24	Clay loam, gravelly loam, silt loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	24-34	Loamy sand, very gravelly sandy loam, gravelly sandy loam	SM, GM, GP-GM	A-1-b, A-1-a, A-2-4	0	0	25-90	10-90	5-70	2-25	0-25	NP-8
	34-72	Gravelly silty clay loam, very gravelly clay loam, gravelly loamy sand, cemented material	GC, GM, GP-GM	A-2-6, A-1, A-2	0	0	25-100	10-85	5-70	2-60	0-38	NP-15
Beltsville------	0-3	Silt loam	CL, CL-ML, ML	A-4	0	0	97-100	97-100	89-99	60-88	15-30	NP-10
	3-8	Silt loam, loam	ML, CL	A-4	0	0	92-100	92-100	76-100	53-85	13-30	1-10
	8-20	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	20-41	Loam, silt loam, clay loam, sandy clay loam	SC-SM, SM, CL	A-4, A-6	0	0	75-100	73-100	58-100	35-81	13-39	1-15
	41-65	Sandy clay loam, clay loam, silt loam, loam	SM, CL	A-2-4, A-1, A-7-6	0	0	54-100	50-100	28-86	15-63	16-43	2-17
	65-71	Very gravelly sandy clay loam, gravelly sandy loam, loam, clay loam, sandy clay loam, silty clay loam	SC, GW-GM	A-2-6, A-1-a, A-7-6	0	0	45-100	40-100	18-81	11-64	16-43	2-17
	71-76	Gravelly coarse sandy loam, silt loam, clay loam, loam, sandy loam	SC-SM, SC, SW-SM	A-1-b, A-7-6	0	0	64-100	61-100	23-75	9-53	12-43	NP-17
UdB:												
Udorthents------	0-2	Sandy loam	ML, SC-SM, SM	A-2, A-4	0	0-5	85-100	80-100	50-85	25-55	15-25	NP-5
	2-65	Sandy loam, loam	CL, CL-ML	A-4, A-6	0	0-5	85-100	80-100	70-95	50-75	15-30	5-15
UfA:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
UfA:												
Fallsington, undrained------	0-2	Moderately decomposed plant material	PT	A-8	0	0	95-100	95-100	---	---	---	---
	2-10	Sandy loam, fine sandy loam, loam	CL-ML, SM	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	10-32	Sandy clay loam, loam	SC, CL-ML, CL	A-6, A-7	0	0	95-100	90-100	80-95	35-75	27-45	7-25
	32-39	Loamy sand, sandy loam, sandy clay loam	SM, SC	A-6, A-2	0	0	95-100	90-100	50-90	15-55	0-36	NP-17
	39-46	Sandy clay loam, sandy loam, loamy sand	SC, SM	A-6, A-2	0	0	93-100	90-100	50-90	15-55	0-36	NP-17
	46-80	Sand, loamy sand, sandy loam	SP-SM, SM	A-3, A-2	0	0	93-100	90-100	50-75	5-40	0-26	NP-9
UoE:												
Udorthents------	---	---	---	---	---	---	---	---	---	---	---	---
Ur:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
UsB:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Sassafras-------	0-9	Loam	CL-ML, SM	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
Beltsville------	0-3	Silt loam	ML, CL-ML, CL	A-4	0	0	97-100	97-100	89-99	60-88	15-30	NP-10
	3-8	Silt loam, loam	ML, CL	A-4	0	0	92-100	92-100	76-100	53-85	13-30	1-10
	8-20	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	20-41	Loam, silt loam, clay loam, sandy clay loam	SC-SM, SM, CL	A-4, A-6	0	0	75-100	73-100	58-100	35-81	13-39	1-15
	41-65	Sandy clay loam, clay loam, silt loam, loam	SM, CL	A-2-4, A-1, A-7-6	0	0	54-100	50-100	28-86	15-63	16-43	2-17
	65-71	Very gravelly sandy clay loam, gravelly sandy loam, loam, clay loam, sandy clay loam, silty clay loam	SC, GW-GM	A-2-6, A-1-a, A-7-6	0	0	45-100	40-100	18-81	11-64	16-43	2-17
	71-76	Gravelly coarse sandy loam, silt loam, clay loam, loam, sandy loam	SC-SM, SC, SW-SM	A-1-b, A-7-6	0	0	64-100	61-100	23-75	9-53	12-43	NP-17

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
UsD:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Sassafras-------	0-9	Loam	CL-ML, SM	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
Beltsville------	0-3	Silt loam	CL-ML, CL, ML	A-4	0	0	97-100	97-100	89-99	60-88	15-30	NP-10
	3-8	Silt loam, loam	ML, CL	A-4	0	0	92-100	92-100	76-100	53-85	13-30	1-10
	8-20	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	20-41	Loam, silt loam, clay loam, sandy clay loam	SC-SM, SM, CL	A-4, A-6	0	0	75-100	73-100	58-100	35-81	13-39	1-15
	41-65	Sandy clay loam, clay loam, silt loam, loam	SM, CL	A-2-4, A-1, A-7-6	0	0	54-100	50-100	28-86	15-63	16-43	2-17
	65-71	Very gravelly sandy clay loam, gravelly sandy loam, loam, clay loam, sandy clay loam, silty clay loam	SC, GW-GM	A-2-6, A-1-a, A-7-6	0	0	45-100	40-100	18-81	11-64	16-43	2-17
	71-76	Gravelly coarse sandy loam, silt loam, clay loam, loam, sandy loam	SC-SM, SC, SW-SM	A-1-b, A-7-6	0	0	64-100	61-100	23-75	9-53	12-43	NP-17
UtD:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Udorthents------	0-2	Sandy loam	SM, SC-SM, ML	A-2, A-4	0	0-5	85-100	80-100	50-85	25-55	15-25	NP-5
	2-65	Sandy loam, loam	CL, CL-ML	A-4, A-6	0	0-5	85-100	80-100	70-95	50-75	15-30	5-15
UuB:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Udorthents------	0-3	Loam	CL, ML, CL-ML	A-4	0	0-5	85-100	80-100	70-95	50-75	25-35	5-10
	3-40	Loam, silt loam, clay loam	ML	A-6, A-7-6	0	0-5	90-100	80-100	70-100	55-95	35-45	10-15
	40-65	Weathered bedrock			---	---	---	---	---	---	---	---

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
UuD:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Udorthents------	0-3	Loam	CL, CL-ML, ML	A-4	0	0-5	85-100	80-100	70-95	50-75	25-35	5-10
	3-40	Loam, silt loam, clay loam	ML	A-6, A-7-6	0	0-5	90-100	80-100	70-100	55-95	35-45	10-15
	40-65	Weathered bedrock			---	---	---	---	---	---	---	---
UwC:												
Urban land------	---	---	---	---	---	---	---	---	---	---	---	---
Woodstown-------	0-7	Sandy loam, loam, fine sandy loam	SM, ML, CL-ML	A-2, A-4	0	0	90-100	90-100	40-100	10-90	18-35	2-12
	7-11	Sandy loam, fine sandy loam	SM, ML	A-2, A-4	0	0	90-100	90-100	40-90	10-70	16-31	2-12
	11-29	Sandy clay loam, loam	SC, CL-ML, CL	A-7, A-4	0	0	90-100	90-100	15-100	15-90	20-44	5-25
	29-45	Sand, loamy sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	90-100	85-100	10-90	5-70	0-30	NP-12
	45-80	Sandy loam, sand, loamy sand	SM, SP-SM	A-2, A-3	0	0	90-100	85-100	10-90	5-50	0-30	NP-12
Sassafras-------	0-9	Loam	SM, CL-ML	A-2, A-4	0	0	95-100	90-100	60-95	30-75	20-34	3-12
	9-15	Sandy loam, loam, loamy sand	SM, CL-ML	A-4, A-2	0	0	90-100	85-100	10-100	10-90	0-32	NP-13
	15-30	Loam, sandy clay loam	CL, SC	A-7, A-6	0	0	90-100	85-100	20-100	20-90	27-44	12-25
	30-37	Sandy loam, loamy sand, sand	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
	37-80	Loamy sand, sand, sandy loam	SM, SP-SM	A-2, A-3	0	0	85-100	70-100	10-90	5-70	0-32	NP-13
WaA:												
Watchung--------	0-9	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	9-33	Clay, clay loam, silty clay loam	CH, CL, MH	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	33-54	Loam, silty clay loam, clay loam	ML	A-6, A-7	0	0-5	85-100	80-100	70-100	50-95	35-45	10-15
	54-65	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
WcB:												
Watchung--------	0-9	Silt loam, loam, clay loam	CL, ML	A-6, A-4	0	0	92-100	92-100	81-100	61-96	16-43	2-17
	9-33	Clay, clay loam, silty clay loam	MH, CH, CL	A-7	0	0	95-100	85-100	70-95	55-95	38-59	15-27
	33-54	Loam, silty clay loam, clay loam	ML	A-6, A-7	0	0-5	85-100	80-100	70-100	50-95	35-45	10-15
	54-65	Clay loam, loam, silty clay loam	CL	A-6, A-7-6	0	0-20	95-100	80-100	65-100	30-85	24-44	9-25
WgB:												
Wheaton---------	0-6	Silt loam	CL	A-6	0	0-5	80-100	75-100	65-90	55-80	27-38	12-19
	6-68	Loam, silt loam, channery loam	GC-GM, GC, CL	A-6	0	0-5	65-100	55-95	45-85	35-65	27-36	12-19
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Channery sandy loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	SM, ML, SC-SM	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6
WgD:												
Wheaton---------	0-6	Silt loam	CL	A-6	0	0-5	80-100	75-100	65-90	55-80	27-38	12-19
	6-68	Loam, silt loam, channery loam	CL, GC, GC-GM	A-6	0	0-5	65-100	55-95	45-85	35-65	27-36	12-19
Glenelg---------	0-10	Loam	ML	A-4, A-6	0	0	85-100	80-100	70-100	50-75	32-40	7-12
	10-30	Clay loam, loam, sandy loam	CL, GC, CL-ML	A-4, A-6	0	0	40-100	40-100	40-100	40-100	23-38	7-16
	30-54	Channery sandy loam, loam, sandy loam	ML	A-4	0	0	85-100	80-100	70-100	50-90	32-40	6-12
	54-76	Loam, very channery sandy loam, channery loam	ML, SM, SC-SM	A-2, A-4	0	0	60-100	50-100	40-95	25-75	0-40	NP-6
WhA:												
Wiltshire-------	0-10	Gravelly silt loam, silt loam, loam	CL	A-7, A-6	0	0-2	90-100	85-100	80-90	70-85	25-45	8-19
	10-29	Loam, clay loam, silt loam	CL	A-7, A-4, A-6	0	0-2	90-100	80-100	75-90	50-65	25-43	8-18
	29-43	Silt loam, loam, gravelly clay loam	SC	A-4, A-6	0	0-2	65-100	55-100	45-55	35-45	25-34	8-13
	43-98	Sandy loam, very gravelly clay loam, very gravelly loam	GC-GM, SC	A-2	0	0-2	55-65	45-50	35-45	25-35	21-30	6-11

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
WhB:												
Wiltshire-------	0-10	Gravelly silt loam, silt loam, loam	CL	A-7, A-6	0	0-2	90-100	85-100	80-90	70-85	25-45	8-19
	10-29	Loam, clay loam, silt loam	CL	A-7, A-4, A-6	0	0-2	90-100	80-100	75-90	50-65	25-43	8-18
	29-43	Silt loam, loam, gravelly clay loam	SC	A-4, A-6	0	0-2	65-100	55-100	45-55	35-45	25-34	8-13
	43-98	Sandy loam, very gravelly clay loam, very gravelly loam	GC-GM, SC	A-2	0	0-2	55-65	45-50	35-45	25-35	21-30	6-11
WoA:												
Woodstown-------	0-10	Sandy loam	SM, CL-ML	A-2-4, A-4	0	0	99-100	97-100	60-90	20-65	10-20	NP-5
	10-22	Loam, clay loam, sandy clay loam	SC, ML, CL-ML, CL	A-7, A-4, A-6	0	1	90-100	90-100	40-90	10-70	10-43	NP-20
	22-35	Sandy loam, fine sandy loam	SC, CL-ML, SC-SM	A-2, A-4	0	1	70-100	50-100	15-100	15-90	25-43	5-20
	35-60	Very gravelly sandy loam, loamy fine sand, fine sandy loam	SM, GM	A-2, A-4, A-1, A-3	0	1	70-100	50-100	10-90	5-70	10-25	NP-5
WoB:												
Woodstown-------	0-10	Sandy loam	CL-ML, SM	A-2-4, A-4	0	0	99-100	97-100	60-90	20-65	10-20	NP-5
	10-22	Loam, clay loam, sandy clay loam	SC, ML, CL-ML, CL	A-7, A-4, A-6	0	1	90-100	90-100	40-90	10-70	10-43	NP-20
	22-35	Sandy loam, fine sandy loam	SC, CL-ML, SC-SM	A-2, A-4	0	1	70-100	50-100	15-100	15-90	25-43	5-20
	35-60	Fine sandy loam, loamy fine sand, very gravelly sandy loam	SM, GM	A-2, A-4, A-1, A-3	0	1	70-100	50-100	10-90	5-70	10-25	NP-5
ZbA:												
Zekiah----------	0-3	Silt loam	CL-ML, ML, OL	A-4	0	0	97-100	97-100	89-99	64-88	15-30	NP-10
	3-20	Silt loam, loam	CL-ML, ML	A-4	0	0	95-100	95-100	70-100	45-100	20-40	5-15
	20-27	Sandy loam, loam	SM, ML, SC-SM, CL-ML	A-4, A-2	0	0	90-100	80-100	45-95	30-90	0-41	NP-10
	27-37	Sandy loam, loam, loamy sand	SM, ML, SC-SM, CL-ML	A-4, A-2	0	0	90-100	80-100	40-95	15-75	0-40	NP-10
	37-50	Loam, sandy loam, loamy sand	CL-ML, SM	A-4, A-2	0	0	90-100	80-100	40-95	15-75	0-40	NP-10
	50-80	Stratified sand to loamy sand, coarse sand, sandy loam	SP-SM, SM	A-2, A-3, A-4	0	0	90-100	80-100	40-75	5-40	0-30	NP-5

Table 17.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
ZbA:												
Issue----------	0-4	Silt loam, silty clay loam, fine sandy loam, loam	CL-ML, ML, CL	A-4, A-7-6	0	0	78-100	76-100	61-100	40-100	7-41	NP-16
	4-19	Loam, very fine sandy loam, silt loam	CL-ML, ML, CL	A-4, A-6	0	0	92-100	91-100	75-100	51-100	12-31	NP-11
	19-30	Fine sandy loam, sandy loam, silt loam, very fine sandy loam	SM, ML, CL-ML, CL, GW-GM, GC	A-4, A-6, A-2-4, A-1	0	0	30-100	27-100	21-100	7-91	7-31	NP-11
	30-58	Fine sandy loam, sandy loam, loamy fine sand, gravelly coarse sandy loam, very gravelly sandy loam, very gravelly loamy coarse sand	SM, ML, GW-GM	A-4, A-2-4, A-1	0	0	30-100	27-100	21-100	7-66	7-25	NP-7
	58-70	Silt loam, loam, sandy loam	CL-ML, ML, SM, CL	A-4	0	0	92-100	91-100	74-100	45-100	12-31	NP-11

Table 18.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
AwB:														
Alloway-------------	0-3	10-50	50-75	5-20	0.85-1.55	0.2-2	0.19-0.24	0.2-5.7	0.5-18	.43	.43	3	5	56
	3-8	10-50	5-80	5-20	1.10-1.55	0.06-0.2	0.17-0.21	0.5-2.9	0.1-3.0	.49	.49			
	8-20	0-35	40-80	15-60	1.10-1.60	0.06-0.2	0.17-0.21	0.5-5.9	0.0-1.0	.37	.37			
	20-33	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-5.9	0.0-0.5	.17	.17			
	33-49	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.17	.17			
	49-71	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.37	.37			
	71-75	0-35	40-80	15-60	1.10-1.50	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.49	.49			
BaA:														
Baile---------------	0-9	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37	5	5	56
	9-32	14-45	15-73	10-35	1.30-1.60	0.06-0.2	0.12-0.24	3.0-5.9	0.1-1.0	.43	.43			
	32-65	42-85	28-80	10-25	1.30-1.60	0.06-0.6	0.10-0.24	0.0-2.9	0.1-0.5	.43	.43			
BeA:														
Benevola------------	0-8	15-40	30-60	20-35	1.45-1.55	0.6-2	0.19-0.27	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-33	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
	33-57	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
	57-115	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
BeB:														
Benevola------------	0-8	15-40	30-60	20-35	1.45-1.55	0.6-2	0.19-0.27	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-33	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
	33-57	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
	57-115	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
BeC:														
Benevola------------	0-8	15-40	30-60	20-35	1.45-1.55	0.6-2	0.19-0.27	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	8-33	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
	33-57	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
	57-115	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.28	.28			
BrC:														
Brinklow------------	0-10	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.20	.32	2	4	86
	10-25	20-48	30-65	18-35	1.20-1.60	0.2-0.6	0.12-0.21	3.0-5.9	0.2-0.5	.20	.32			
	25-35	---	---	---	---	---	---	---	---	---	---			
	35-39	---	---	---	---	---	---	---	---	---	---			
BrD:														
Brinklow------------	0-10	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.20	.32	2	4	86
	10-25	20-48	30-65	18-35	1.20-1.60	0.2-0.6	0.12-0.21	3.0-5.9	0.2-0.5	.20	.32			
	25-35	---	---	---	---	---	---	---	---	---	---			
	35-39	---	---	---	---	---	---	---	---	---	---			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
BtF:														
Brinklow------------	0-10	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.20	.32	2	4	86
	10-25	20-48	30-65	18-35	1.20-1.60	0.2-0.6	0.12-0.21	3.0-5.9	0.2-0.5	.20	.32			
	25-35	---	---	---	---	---	---	---	---	---	---			
	35-39	---	---	---	---	---	---	---	---	---	---			
Blocktown-----------	0-6	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.24	.37	2	8	0
	6-17	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.15	.32			
	17-21	---	---	---	---	---	---	---	---	---	---			
	21-25	---	---	---	---	---	---	---	---	---	---			
CeB:														
Chillum-------------	0-2	5-52	28-85	10-23	1.20-1.50	0.6-2	0.06-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	2-9	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	9-12	5-52	15-85	18-35	1.40-1.55	0.6-2	0.09-0.22	0.0-2.9	0.5-0.5	.28	.37			
	12-24	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	24-34	43-90	0-50	0-20	1.50-1.65	0.2-2	0.01-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-72	5-85	0-70	5-35	1.45-1.65	0.2-2	0.01-0.15	0.0-2.9	0.0-0.5	.15	.37			
CeC:														
Chillum-------------	0-2	5-52	28-85	10-23	1.20-1.50	0.6-2	0.06-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	2-9	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	9-12	5-52	15-85	18-35	1.40-1.55	0.6-2	0.09-0.22	0.0-2.9	0.5-0.5	.28	.37			
	12-24	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	24-34	43-90	0-50	0-20	1.50-1.65	0.2-2	0.01-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-72	5-85	0-70	5-35	1.45-1.65	0.2-2	0.01-0.15	0.0-2.9	0.0-0.5	.15	.37			
ChB:														
Chillum-------------	0-2	5-52	28-85	10-23	1.20-1.50	0.6-2	0.06-0.24	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-9	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	9-12	5-52	15-85	18-35	1.40-1.55	0.6-2	0.09-0.22	0.0-2.9	0.5-0.5	.28	.37			
	12-24	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	24-34	43-90	0-50	0-20	1.50-1.65	0.2-2	0.01-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-72	5-85	0-70	5-35	1.45-1.65	0.2-2	0.01-0.15	0.0-2.9	0.0-0.5	.15	.37			
Russett-------------	0-4	36-78	12-50	4-17	1.30-1.60	2-6	0.14-0.18	0.0-2.9	0.5-15	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
ChC:														
Chillum-------------	0-2	5-52	28-85	10-23	1.20-1.50	0.6-2	0.06-0.24	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-9	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	9-12	5-52	15-85	18-35	1.40-1.55	0.6-2	0.09-0.22	0.0-2.9	0.5-0.5	.28	.37			
	12-24	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	24-34	43-90	0-50	0-20	1.50-1.65	0.2-2	0.01-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-72	5-85	0-70	5-35	1.45-1.65	0.2-2	0.01-0.15	0.0-2.9	0.0-0.5	.15	.37			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
ChC:														
Russett-------------	0-4	36-78	12-50	4-17	1.30-1.60	2-6	0.14-0.18	0.0-2.9	0.5-15	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
Co:														
Codorus-------------	0-11	20-35	50-65	15-25	1.20-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	11-18	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.32	.37			
	18-40	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	40-60	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.20	.28			
Hatboro-------------	0-11	20-40	50-65	10-20	1.20-1.40	0.6-2	0.16-0.22	0.0-2.9	1.0-4.0	.37	.37	5	5	56
	11-44	15-50	20-65	15-35	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	0.0-0.5	.32	.37			
	44-55	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.37	.43			
	55-60	45-90	5-35	5-45	1.10-1.60	2-6	0.04-0.08	0.0-2.9	0.0-0.5	.20	.28			
Cp:														
Codorus, frequently flooded------------	0-1	10-50	50-75	7-25	0.75-1.55	0.6-2	0.19-0.24	0.2-5.7	1.0-15	.37	.37	5	5	56
	1-57	10-52	20-80	7-27	1.20-1.50	0.6-2	0.12-0.19	0.0-5.0	1.0-5.0	.37	.37			
	57-63	10-52	20-80	7-30	1.20-1.50	0.6-2	0.04-0.19	0.0-5.0	1.0-5.0	.37	.37			
Hatboro, frequently flooded------------	0-2	---	---	1-5	0.10-0.30	2-20	0.55-0.65	---	30-90	.02	.02	5	5	56
	2-8	10-50	50-75	7-25	0.75-1.55	0.6-2	0.19-0.24	0.2-5.7	1.0-15	.37	.37			
	8-18	10-50	28-80	7-25	1.00-1.40	0.6-2	0.19-0.24	0.2-5.7	0.0-0.5	.43	.43			
	18-66	20-90	10-50	7-35	1.00-1.50	0.6-2	0.16-0.19	0.2-6.0	0.1-0.5	.28	.28			
CrD:														
Croom---------------	0-1	23-90	28-80	7-20	1.20-1.60	0.6-2	0.03-0.19	0.0-2.9	1.0-3.0	.28	.24	5	5	56
	1-9	23-90	28-80	7-25	1.30-1.60	0.6-2	0.03-0.19	0.0-2.9	0.5-3.0	.37	.28			
	9-13	15-80	10-65	10-40	1.40-1.60	0.2-0.6	0.02-0.17	0.0-2.9	0.0-0.5	.24	.10			
	13-30	20-85	3-53	8-40	1.40-1.60	0.2-0.6	0.02-0.10	0.0-2.9	0.0-0.5	.15	.05			
	30-54	20-85	2-53	8-40	1.40-1.60	0.2-0.6	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	54-66	43-90	2-50	3-30	1.45-1.65	0.6-2	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	66-80	43-95	1-50	2-20	1.50-1.80	0.6-2	0.00-0.05	0.0-2.9	0.0-0.5	.20	.02			
Evesboro------------	0-4	70-98	2-25	1-10	0.15-1.70	6-100	0.05-0.60	0.0-2.9	0.2-85	.15	.15	5	2	134
	4-16	70-98	2-25	1-10	1.60-1.80	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	16-39	70-98	2-25	1-10	1.60-1.80	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	39-80	70-98	2-25	1-7	1.60-1.80	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.10	.10			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
DhB:														
Downer--------------	0-11	50-90	1-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.17	.20	5	3	86
	11-35	43-85	1-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	35-80	70-98	1-30	1-5	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
Hammonton-----------	0-11	50-90	2-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.17	.17	5	2	134
	11-30	43-85	2-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	30-80	70-98	2-30	1-8	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
DhC:														
Downer--------------	0-11	50-90	1-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.17	.17	5	3	86
	11-35	43-85	1-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	35-80	70-98	1-30	1-5	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
Hammonton-----------	0-11	50-90	2-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.17	.17	5	2	134
	11-30	43-85	2-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	30-80	70-98	2-30	1-5	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
DhD:														
Downer--------------	0-11	50-90	1-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.17	.17	5	3	86
	11-35	43-85	1-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	35-80	70-98	1-30	1-5	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
Hammonton-----------	0-11	50-90	2-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.24	.24	5	2	134
	11-30	43-85	2-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	30-80	70-98	2-30	1-5	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
DxC:														
Downer--------------	0-11	50-90	1-35	4-15	1.50-1.65	2-20	0.10-0.30	0.0-2.9	0.5-3.0	.17	.17	5	3	86
	11-35	43-85	1-35	5-17	1.50-1.60	2-6	0.12-0.13	1.0-2.9	0.0-0.5	.17	.17			
	35-80	70-98	1-30	1-5	1.55-1.70	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
Phalanx-------------	0-11	43-90	5-50	2-15	1.20-1.60	0.6-6	0.03-0.15	0.0-2.9	0.5-2.0	.20	.15	3	2	134
	11-15	43-90	5-50	2-20	1.30-1.60	0.6-6	0.08-0.13	0.0-2.9	0.5-2.0	.20	.24			
	15-22	43-85	5-50	2-20	1.45-1.60	0.6-6	0.06-0.17	0.0-2.9	0.1-0.2	.15	.24			
	22-28	43-85	5-50	2-35	1.45-1.60	0.6-6	0.06-0.17	0.0-2.9	0.1-0.2	.20	.24			
	28-33	43-85	5-50	2-35	1.40-1.60	0.6-6	0.06-0.17	0.0-2.9	0.1-0.2	.24	.37			
	33-38	0-85	0-50	0-35	1.60-2.60	0.00-0.06	0.00-0.08	0.0-2.9	0.1-0.2	.02	.24			
EaB:														
Elioak--------------	0-6	10-40	30-60	15-27	1.25-1.40	0.6-2	0.12-0.24	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	6-15	10-35	40-70	20-30	1.60-1.90	0.06-0.2	0.05-0.10	0.0-2.9	0.0-0.5	.32	.37			
	15-42	10-30	30-50	30-60	1.30-1.60	0.2-2	0.08-0.12	0.0-2.9	0.0-0.5	.37	.37			
	42-60	25-50	30-55	15-27	1.25-1.40	0.6-2	0.08-0.12	0.0-2.9	0.0-0.5	.49	.55			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
EbC:														
Evesboro------------	0-4	70-98	2-25	1-10	0.15-1.70	6-100	0.05-0.60	0.0-2.9	0.2-85	.15	.15	5	2	134
	4-16	70-98	2-25	1-10	1.60-1.80	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	16-39	70-98	2-25	1-10	1.60-1.80	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	39-80	70-98	2-25	1-7	1.60-1.80	6-100	0.02-0.10	0.0-2.9	0.0-0.5	.10	.10			
Fa:														
Fallsington, undrained----------	0-2	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	5	56
	2-10	23-85	2-40	8-18	1.50-1.80	1-6	0.13-0.19	0.0-1.5	0.5-3.0	.20	.20			
	10-32	23-80	2-40	18-35	1.50-1.80	0.6-2	0.17-0.19	0.0-2.9	0.0-0.8	.24	.24			
	32-39	43-90	2-35	2-25	1.50-1.80	1-20	0.10-0.19	0.0-2.9	0.0-0.5	.10	.10			
	39-46	43-90	2-40	2-25	1.50-1.80	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	46-80	43-95	1-25	1-15	1.50-1.80	2-100	0.05-0.13	0.0-1.0	0.0-0.5	.05	.05			
GaC:														
Gaila---------------	0-8	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.24	.28	5	5	56
	8-17	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	17-20	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	20-76	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
GaD:														
Gaila---------------	0-8	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.24	.28	5	5	56
	8-17	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	17-20	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	20-76	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
GbA:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	4	6	48
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
GbB:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
GbC:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
GcB:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
GcB:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
GcC:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
GdC:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
GdD:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
GfB:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
GfC:														
Gladstone-----------	0-8	20-45	30-55	10-27	1.20-1.40	0.6-6	0.11-0.16	0.0-2.9	2.0-4.0	.20	.24	3	5	56
	8-30	44-70	24-40	18-35	1.40-1.60	0.6-6	0.08-0.14	3.0-5.9	0.0-0.5	.28	.32			
	30-75	35-85	10-35	2-20	1.30-1.50	2-6	0.08-0.14	0.0-2.9	0.0-0.5	.28	.32			
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
GgA:														
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
GgB:														
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
GgC:														
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
GhB:														
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
GhC:														
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (Ksat)	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
GhC:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28			
	10-42	30-52	20-50	20-32	1.20-1.60	0.2-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	42-54	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
GmA:														
Glenville-----------	0-8	10-40	40-70	10-20	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	8-30	10-50	20-55	10-35	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.5	.43	.55			
	30-40	20-50	20-55	20-35	1.60-1.80	0.06-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.43	.55			
	40-70	30-55	25-50	5-25	1.40-1.60	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.43	.49			
GmB:														
Glenville-----------	0-8	10-40	40-70	10-20	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	8-30	10-50	20-55	10-35	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.5	.43	.55			
	30-40	20-50	20-55	20-35	1.60-1.80	0.06-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.43	.55			
	40-70	30-55	25-50	5-25	1.40-1.60	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.43	.49			
GmC:														
Glenville-----------	0-8	10-40	40-70	10-20	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	8-30	10-50	20-55	10-35	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.5	.43	.55			
	30-40	20-50	20-55	20-35	1.60-1.80	0.06-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.43	.55			
	40-70	30-55	25-50	5-25	1.40-1.60	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.43	.49			
GnB:														
Glenville-----------	0-8	10-40	40-70	10-20	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	8-30	10-50	20-55	10-35	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.5	.43	.55			
	30-40	20-50	20-55	20-35	1.60-1.80	0.06-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.43	.55			
	40-70	30-55	25-50	5-25	1.40-1.60	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.43	.49			
Baile---------------	0-9	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37	5	5	56
	9-32	14-45	15-73	10-35	1.30-1.60	0.06-0.2	0.12-0.24	3.0-5.9	0.1-1.0	.43	.43			
	32-65	42-85	28-80	10-25	1.30-1.60	0.06-0.6	0.10-0.24	0.0-2.9	0.1-0.5	.43	.43			
GoB:														
Glenville-----------	0-8	10-40	40-70	10-20	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	8-30	10-50	20-55	10-35	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.5	.43	.55			
	30-40	20-50	20-55	20-35	1.60-1.80	0.06-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.43	.55			
	40-70	30-55	25-50	5-25	1.40-1.60	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.43	.49			
Codorus-------------	0-11	20-35	50-65	15-25	1.20-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	11-18	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.32	.37			
	18-40	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	40-60	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.20	.28			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
GuB:														
Glenville-----------	0-8	10-40	40-70	10-20	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	2.0-4.0	.37	.43	4	5	56
	8-30	10-50	20-55	10-35	1.40-1.60	0.2-2	0.12-0.16	0.0-2.9	0.0-0.5	.43	.55			
	30-40	20-50	20-55	20-35	1.60-1.80	0.06-0.6	0.08-0.12	0.0-2.9	0.0-0.5	.43	.55			
	40-70	30-55	25-50	5-25	1.40-1.60	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.43	.49			
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Udorthents----------	0-3	35-50	20-40	15-25	1.00-1.45	0.06-0.6	0.14-0.18	0.0-2.9	1.0-2.0	.28	.28	4	5	56
	3-40	30-50	30-55	25-35	1.30-1.60	0.06-0.2	0.14-0.20	3.0-5.9	1.0-2.0	.37	.37			
	40-65	---	---	---	---	---	---	---	---	---	---			
Ha:														
Hatboro-------------	0-11	20-40	50-65	10-20	1.20-1.40	0.6-2	0.16-0.22	0.0-2.9	1.0-4.0	.37	.37	5	5	56
	11-44	15-50	20-65	15-35	1.20-1.40	0.6-2	0.16-0.20	0.0-2.9	0.0-0.5	.32	.37			
	44-55	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.37	.43			
	55-60	45-90	5-35	5-45	1.10-1.60	2-6	0.04-0.08	0.0-2.9	0.0-0.5	.20	.28			
Codorus-------------	0-11	20-35	50-65	15-25	1.20-1.40	0.6-2	0.14-0.20	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	11-18	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.32	.37			
	18-40	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	40-60	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.20	.28			
JaB:														
Jackland------------	0-8	5-40	50-80	15-27	1.00-1.30	0.6-2	0.16-0.22	0.0-2.9	1.0-4.0	.43	.43	5	6	48
	8-41	5-40	10-45	30-65	1.20-1.50	0.01-0.06	0.08-0.12	9.0-25.0	0.1-0.8	.55	.55			
	41-65	18-46	27-44	10-40	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.0-0.5	.15	.15			
LaB:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
LaC:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
LeB:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
LeC:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
LmB:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
Montalto------------	0-4	10-40	30-60	18-35	1.40-1.70	0.6-6	0.12-0.16	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	4-8	15-40	30-60	20-35	1.45-1.55	0.6-2	0.19-0.27	0.0-2.9	1.0-3.0	.28	.28			
	8-43	20-45	10-40	30-55	1.60-1.90	0.2-2	0.14-0.16	6.0-8.9	0.1-0.8	.28	.28			
	43-72	---	---	20-40	1.60-1.80	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.28	.28			
LoB:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
Montalto------------	0-4	10-40	30-60	18-35	1.40-1.70	0.6-6	0.12-0.16	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	4-8	15-40	30-60	20-35	1.45-1.55	0.6-2	0.19-0.27	0.0-2.9	1.0-3.0	.28	.28			
	8-43	20-45	10-40	30-55	1.60-1.90	0.2-2	0.14-0.16	6.0-8.9	0.1-0.8	.28	.28			
	43-72	---	---	20-40	1.60-1.80	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.28	.28			
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
LoC:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
Montalto------------	0-4	10-40	30-60	18-35	1.40-1.70	0.6-6	0.12-0.16	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	4-8	15-40	30-60	20-35	1.45-1.55	0.6-2	0.19-0.27	0.0-2.9	1.0-3.0	.28	.28			
	8-43	20-45	10-40	30-55	1.60-1.90	0.2-2	0.14-0.16	6.0-8.9	0.1-0.8	.28	.28			
	43-72	---	---	20-40	1.60-1.80	0.6-2	0.14-0.21	3.0-5.9	0.0-0.5	.28	.28			
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
LrD:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
Relay---------------	0-6	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.20	.24	5	5	56
	6-15	10-50	5-80	5-20	1.10-1.55	0.06-0.2	0.17-0.21	0.5-2.9	0.1-3.0	.49	.49			
	15-30	8-30	28-70	16-34	1.45-1.70	0.2-2	0.15-0.22	1.0-1.9	0.0-0.3	.37	.37			
	30-40	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	40-65	50-90	2-35	4-15	1.60-1.80	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
LrF:														
Legore--------------	0-1	---	---	0-2	0.15-0.30	6-100	0.30-0.60	---	50-85	.02	.02	5	6	48
	1-2	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.37			
	2-11	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	11-27	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-7.0	0.0-0.5	.43	.43			
	27-52	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.32	.37			
	52-72	45-80	5-30	5-20	1.25-1.50	2-6	0.08-0.14	0.0-2.9	0.2-0.5	.32	.32			
Relay---------------	0-6	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.20	.24	3	5	56
	6-15	10-50	5-80	5-20	1.10-1.55	0.06-0.2	0.17-0.21	0.5-2.9	0.1-3.0	.49	.49			
	15-30	8-30	28-70	16-34	1.45-1.70	0.2-2	0.15-0.22	1.0-1.9	0.0-0.3	.37	.37			
	30-40	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	40-65	50-90	2-35	4-15	1.60-1.80	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
MaB:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	6	48
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
MaC:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	6	48
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
MaD:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
McD:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
MgD:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
Bannertown----------	0-4	50-80	10-35	7-20	1.35-1.60	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.24	3	5	56
	4-11	50-80	10-35	7-20	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.1-0.8	.17	.24			
	11-21	50-80	10-35	7-20	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.1-0.8	.17	.24			
	21-34	50-80	10-35	5-15	1.45-1.65	2-6	0.08-0.12	0.0-2.9	0.0-0.8	.17	.24			
	34+	---	---	---	---	0.01-0.06	---	---	---	---	---			
MgF:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
Bannertown----------	0-4	50-80	10-35	7-20	1.35-1.60	2-6	0.10-0.13	0.0-2.9	1.0-3.0	.17	.24	3	5	56
	4-11	50-80	10-35	7-20	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.1-0.8	.17	.24			
	11-21	50-80	10-35	7-20	1.35-1.60	2-6	0.10-0.14	0.0-2.9	0.1-0.8	.17	.24			
	21-34	50-80	10-35	5-15	1.45-1.65	2-6	0.08-0.12	0.0-2.9	0.0-0.8	.17	.24			
	34+	---	---	---	---	0.01-0.06	---	---	---	---	---			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
MkF:														
Manor---------------	0-6	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28	5	5	56
	6-22	40-75	10-30	10-20	1.20-1.50	0.6-2	0.14-0.20	0.0-2.9	0.0-0.5	.32	.37			
	22-72	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24			
Brinklow------------	0-10	20-52	28-88	15-32	1.20-1.40	0.2-0.6	0.16-0.25	0.0-2.9	1.0-4.0	.20	.32	2	4	86
	10-25	20-48	30-65	18-35	1.20-1.60	0.2-0.6	0.12-0.21	3.0-5.9	0.2-0.5	.20	.32			
	25+	---	---	---	---	---	---	---	---	---	---			
MoB:														
Mount Lucas---------	0-9	10-40	50-80	10-20	1.20-1.30	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32	5	6	48
	9-38	18-40	18-50	17-32	1.30-1.60	0.06-0.6	0.12-0.16	0.0-2.9	0.1-0.8	.28	.32			
	38-60	30-70	25-50	5-28	1.30-1.70	0.06-6	0.04-0.12	0.0-2.9	0.0-0.5	.28	.37			
MoC:														
Mount Lucas---------	0-9	10-40	50-80	10-20	1.20-1.30	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.32	.32	5	5	56
	9-38	18-40	18-50	17-32	1.30-1.60	0.06-0.6	0.12-0.16	0.0-2.9	0.1-0.8	.28	.32			
	38-60	30-70	25-50	5-28	1.30-1.70	0.06-6	0.04-0.12	0.0-2.9	0.0-0.5	.28	.37			
OcB:														
Occoquan------------	0-8	35-65	15-40	7-27	1.10-1.40	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.20	.24	4	5	56
	8-24	45-75	10-40	18-35	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.1-1.0	.24	.28			
	24-59	45-75	10-30	5-27	1.20-1.50	0.6-6	0.07-0.10	0.0-2.9	0.1-0.5	.28	.32			
	59-63	---	---	---	---	0.01-0.06	---	---	0.1-0.5	---	---			
OcC:														
Occoquan------------	0-8	35-65	15-40	7-27	1.10-1.40	0.6-2	0.18-0.22	0.0-2.9	1.0-3.0	.20	.24	5	5	56
	8-24	45-75	10-40	18-35	1.30-1.60	0.6-2	0.10-0.14	0.0-2.9	0.1-1.0	.24	.28			
	24-59	45-75	10-30	5-27	1.20-1.50	0.6-6	0.07-0.10	0.0-2.9	0.1-0.5	.28	.32			
	59-63	---	---	---	---	0.01-0.06	---	---	0.1-0.5	---	---			
PfC:														
Patapsco------------	0-10	75-95	3-10	0-9	1.60-1.80	6-20	0.04-0.11	0.0-2.9	0.2-2.0	.10	.15	5	1	160
	10-61	75-98	0-20	0-7	1.60-1.80	6-20	0.04-0.10	0.0-2.9	0.1-0.5	.10	.10			
	61-74	45-85	5-30	8-23	1.50-1.97	0.2-6	0.08-0.17	0.0-2.9	0.0-0.2	.24	.24			
	74-80	5-85	6-70	8-36	1.45-1.92	0.2-6	0.08-0.20	0.0-2.9	0.0-0.2	.24	.24			
Fort Mott-----------	0-10	70-98	8-20	3-10	1.55-1.75	6-100	0.05-0.10	0.0-2.9	0.5-2.0	.17	.15	5	2	134
	10-24	70-90	8-20	3-10	1.60-1.75	6-20	0.08-0.10	0.0-2.9	0.2-1.0	.17	.17			
	24-36	43-85	8-50	7-22	1.55-1.75	0.6-6	0.13-0.15	0.0-2.9	0.1-0.5	.17	.17			
	36-80	70-98	8-20	3-10	1.55-1.75	6-100	0.05-0.10	0.0-2.9	0.1-0.4	.15	.15			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
RsB:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
RsC:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
RsD:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
RtB:														
Russett-------------	0-4	36-78	12-50	4-17	1.30-1.60	2-6	0.14-0.18	0.0-2.9	0.5-15	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
Alloway-------------	0-3	10-50	50-75	5-20	0.85-1.55	0.2-2	0.19-0.24	0.2-5.7	0.5-18	.43	.43	3	5	56
	3-8	10-50	5-80	5-20	1.10-1.55	0.06-0.2	0.17-0.21	0.5-2.9	0.1-3.0	.49	.49			
	8-20	0-35	40-80	15-60	1.10-1.60	0.06-0.2	0.17-0.21	0.5-5.9	0.0-1.0	.37	.37			
	20-33	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-5.9	0.0-0.5	.17	.17			
	33-49	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.17	.17			
	49-71	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.37	.37			
	71-75	0-35	40-80	15-60	1.10-1.50	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.49	.49			
Hambrook------------	0-10	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24	5	3	86
	10-14	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.32	.32			
	14-28	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	28-65	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
	65-80	5-85	8-88	5-27	1.45-1.75	0.2-0.4	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
RtC:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
Alloway-------------	0-3	10-50	50-75	5-20	0.85-1.55	0.2-2	0.19-0.24	0.2-5.7	0.5-18	.43	.43	3	5	56
	3-8	10-50	5-80	5-20	1.10-1.55	0.06-0.2	0.17-0.21	0.5-2.9	0.1-3.0	.49	.49			
	8-20	0-35	40-80	15-60	1.10-1.60	0.06-0.2	0.17-0.21	0.5-5.9	0.0-1.0	.37	.37			
	20-33	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-5.9	0.0-0.5	.17	.17			
	33-49	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.17	.17			
	49-71	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.37	.37			
	71-75	0-35	40-80	15-60	1.10-1.50	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.49	.49			
Hambrook------------	0-10	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24	5	3	86
	10-14	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.32	.32			
	14-28	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	28-65	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
	65-80	5-85	8-88	5-27	1.45-1.75	0.2-0.4	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
RtD:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
Alloway-------------	0-3	10-50	50-75	5-20	0.85-1.55	0.2-2	0.19-0.24	0.2-5.7	0.5-18	.43	.43	3	5	56
	3-8	10-50	5-80	5-20	1.10-1.55	0.06-0.2	0.17-0.21	0.5-2.9	0.1-3.0	.49	.49			
	8-20	0-35	40-80	15-60	1.10-1.60	0.06-0.2	0.17-0.21	0.5-5.9	0.0-1.0	.37	.37			
	20-33	0-45	20-70	15-65	1.10-1.60	0.06-0.2	0.17-0.21	2.0-5.9	0.0-0.5	.17	.17			
	33-49	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.17	.17			
	49-71	0-45	20-73	27-65	1.10-1.60	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.37	.37			
	71-75	0-35	40-80	15-60	1.10-1.50	0.06-0.2	0.17-0.21	1.0-5.9	0.0-0.5	.49	.49			
Hambrook------------	0-10	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24	5	3	86
	10-14	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.32	.32			
	14-28	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	28-65	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
	65-80	5-85	8-88	5-27	1.45-1.75	0.2-0.4	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
RuB:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
Beltsville----------	0-3	10-50	50-72	7-25	0.75-1.55	0.6-2	0.19-0.24	0.0-5.7	1.0-15	.37	.37	4	5	56
	3-8	1-52	28-80	7-25	1.45-1.55	0.2-0.6	0.17-0.22	0.0-2.9	0.0-1.0	.49	.49			
	8-20	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.49	.49			
	20-41	15-80	15-70	7-35	1.65-1.90	0.00-0.06	0.13-0.20	0.0-2.9	0.0-0.5	.37	.32			
	41-65	15-80	8-70	10-40	1.55-1.80	0.00-0.2	0.09-0.20	0.0-2.9	0.0-0.5	.15	.15			
	65-71	5-85	1-70	10-40	1.45-1.70	0.2-0.6	0.06-0.20	0.0-5.0	0.0-0.5	.15	.15			
	71-76	5-85	1-70	5-40	1.45-1.70	0.2-6	0.06-0.20	0.0-2.9	0.0-0.5	.24	.20			
RuC:														
Russett-------------	0-4	23-90	10-50	3-20	1.30-1.60	0.6-6	0.12-0.18	0.0-2.9	0.5-16	.24	.28	5	3	134
	4-7	23-85	15-50	7-30	1.40-1.85	0.06-0.6	0.14-0.18	0.0-2.9	0.0-2.0	.37	.37			
	7-13	20-80	15-53	7-40	1.40-1.70	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.6	.37	.37			
	13-46	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
	46-57	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.15	.15			
	57-77	5-85	15-73	5-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.37	.37			
Beltsville----------	0-3	10-50	50-72	7-25	0.75-1.55	0.6-2	0.19-0.24	0.0-5.7	1.0-15	.37	.37	4	5	56
	3-8	1-52	28-80	7-25	1.45-1.55	0.2-0.6	0.17-0.22	0.0-2.9	0.0-1.0	.49	.49			
	8-20	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.49	.49			
	20-41	15-80	15-70	7-35	1.65-1.90	0.00-0.06	0.13-0.20	0.0-2.9	0.0-0.5	.37	.32			
	41-65	15-80	8-70	10-40	1.55-1.80	0.00-0.2	0.09-0.20	0.0-2.9	0.0-0.5	.15	.15			
	65-71	5-85	1-70	10-40	1.45-1.70	0.2-0.6	0.06-0.20	0.0-5.0	0.0-0.5	.15	.15			
	71-76	5-85	1-70	5-40	1.45-1.70	0.2-6	0.06-0.20	0.0-2.9	0.0-0.5	.24	.20			
SaB:														
Sassafras-----------	0-9	23-85	2-45	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-2.5	.37	.37	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
SaC:														
Sassafras-----------	0-9	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
SfB:														
Sassafras-----------	0-9	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
SrC:														
Sassafras-----------	0-9	23-85	2-45	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-2.5	.37	.37	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
Croom---------------	0-1	23-90	28-80	7-20	1.20-1.60	0.6-2	0.03-0.19	0.0-2.9	1.0-3.0	.28	.24	5	5	56
	1-9	23-90	28-80	7-25	1.30-1.60	0.6-2	0.03-0.19	0.0-2.9	0.5-3.0	.37	.28			
	9-13	15-80	10-65	10-40	1.40-1.60	0.2-0.6	0.02-0.17	0.0-2.9	0.0-0.5	.24	.10			
	13-30	20-85	3-53	8-40	1.40-1.60	0.2-0.6	0.02-0.10	0.0-2.9	0.0-0.5	.15	.05			
	30-54	20-85	2-53	8-40	1.40-1.60	0.2-0.6	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	54-66	43-90	2-50	3-30	1.45-1.65	0.6-2	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	66-80	43-95	1-50	2-20	1.50-1.80	0.6-2	0.00-0.05	0.0-2.9	0.0-0.5	.20	.02			
SrD:														
Sassafras-----------	0-9	23-85	2-45	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-2.5	.37	.37	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
Croom---------------	0-1	23-90	28-80	7-20	1.20-1.60	0.6-2	0.03-0.19	0.0-2.9	1.0-3.0	.28	.24	5	5	56
	1-9	23-90	28-80	7-25	1.30-1.60	0.6-2	0.03-0.19	0.0-2.9	0.5-3.0	.37	.28			
	9-13	15-80	10-65	10-40	1.40-1.60	0.2-0.6	0.02-0.17	0.0-2.9	0.0-0.5	.24	.10			
	13-30	20-85	3-53	8-40	1.40-1.60	0.2-0.6	0.02-0.10	0.0-2.9	0.0-0.5	.15	.05			
	30-54	20-85	2-53	8-40	1.40-1.60	0.2-0.6	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	54-66	43-90	2-50	3-30	1.45-1.65	0.6-2	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	66-80	43-95	1-50	2-20	1.50-1.80	0.6-2	0.00-0.05	0.0-2.9	0.0-0.5	.20	.02			
SrE:														
Sassafras-----------	0-9	23-90	5-50	2-18	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.5-2.5	.24	.24	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
SrE:														
Croom---------------	0-1	23-90	28-80	7-20	1.20-1.60	0.6-2	0.03-0.19	0.0-2.9	1.0-3.0	.28	.24	5	5	56
	1-9	23-90	28-80	7-25	1.30-1.60	0.6-2	0.03-0.19	0.0-2.9	0.5-3.0	.37	.28			
	9-13	15-80	10-65	10-40	1.40-1.60	0.2-0.6	0.02-0.17	0.0-2.9	0.0-0.5	.24	.10			
	13-30	20-85	3-53	8-40	1.40-1.60	0.2-0.6	0.02-0.10	0.0-2.9	0.0-0.5	.15	.05			
	30-54	20-85	2-53	8-40	1.40-1.60	0.2-0.6	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	54-66	43-90	2-50	3-30	1.45-1.65	0.6-2	0.01-0.11	0.0-2.9	0.0-0.5	.15	.02			
	66-80	43-95	1-50	2-20	1.50-1.80	0.6-2	0.00-0.05	0.0-2.9	0.0-0.5	.20	.02			
UaF:														
Udorthents----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
UbF:														
Udorthents----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
UcB:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Chillum-------------	0-2	5-52	28-85	10-23	1.20-1.50	0.6-2	0.06-0.24	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-9	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	9-12	5-52	15-85	18-35	1.40-1.55	0.6-2	0.09-0.22	0.0-2.9	0.5-0.5	.28	.37			
	12-24	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	24-34	43-90	0-50	0-20	1.50-1.65	0.2-2	0.01-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-72	5-85	0-70	5-35	1.45-1.65	0.2-2	0.01-0.15	0.0-2.9	0.0-0.5	.15	.37			
Beltsville----------	0-3	10-50	50-72	7-25	0.75-1.55	0.6-2	0.19-0.24	0.0-5.7	1.0-15	.37	.37	4	5	56
	3-8	1-52	28-80	7-25	1.45-1.55	0.2-0.6	0.17-0.22	0.0-2.9	0.0-1.0	.49	.49			
	8-20	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.49	.49			
	20-41	15-80	15-70	7-35	1.65-1.90	0.00-0.06	0.13-0.20	0.0-2.9	0.0-0.5	.37	.32			
	41-65	15-80	8-70	10-40	1.55-1.80	0.00-0.2	0.09-0.20	0.0-2.9	0.0-0.5	.15	.15			
	65-71	5-85	1-70	10-40	1.45-1.70	0.2-0.6	0.06-0.20	0.0-5.0	0.0-0.5	.15	.15			
	71-76	5-85	1-70	5-40	1.45-1.70	0.2-6	0.06-0.20	0.0-2.9	0.0-0.5	.24	.20			
UcD:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Chillum-------------	0-2	5-52	28-85	10-23	1.20-1.50	0.6-2	0.06-0.24	0.0-2.9	1.0-3.0	.37	.43	4	5	56
	2-9	5-52	28-85	5-20	1.40-1.55	0.6-2	0.06-0.20	0.0-2.9	0.5-1.0	.28	.43			
	9-12	5-52	15-85	18-35	1.40-1.55	0.6-2	0.09-0.22	0.0-2.9	0.5-0.5	.28	.37			
	12-24	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	24-34	43-90	0-50	0-20	1.50-1.65	0.2-2	0.01-0.12	0.0-2.9	0.0-0.5	.10	.10			
	34-72	5-85	0-70	5-35	1.45-1.65	0.2-2	0.01-0.15	0.0-2.9	0.0-0.5	.15	.37			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
UcD:														
Beltsville----------	0-3	10-50	50-72	7-25	0.75-1.55	0.6-2	0.19-0.24	0.0-5.7	1.0-15	.37	.37	4	5	56
	3-8	1-52	28-80	7-25	1.45-1.55	0.2-0.6	0.17-0.22	0.0-2.9	0.0-1.0	.49	.49			
	8-20	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.49	.49			
	20-41	15-80	15-70	7-35	1.65-1.90	0.00-0.06	0.13-0.20	0.0-2.9	0.0-0.5	.37	.32			
	41-65	15-80	8-70	10-40	1.55-1.80	0.00-0.2	0.09-0.20	0.0-2.9	0.0-0.5	.15	.15			
	65-71	5-85	1-70	10-40	1.45-1.70	0.2-0.6	0.06-0.20	0.0-5.0	0.0-0.5	.15	.15			
	71-76	5-85	1-70	5-40	1.45-1.70	0.2-6	0.06-0.20	0.0-2.9	0.0-0.5	.24	.20			
UdB:														
Udorthents----------	0-2	---	---	6-15	1.50-1.60	0.06-0.6	0.10-0.13	0.0-2.9	1.0-2.0	.28	.28	5	3	86
	2-65	---	---	8-20	1.45-1.60	0.06-0.6	0.12-0.15	3.0-5.9	1.0-2.0	.28	.28			
UfA:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Fallsington, undrained----------	0-2	---	---	0-2	0.15-0.30	6-20	0.30-0.60	---	50-85	.02	.02	5	5	56
	2-10	23-85	2-40	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-3.0	.20	.20			
	10-32	23-80	2-40	18-35	1.50-1.80	0.6-2	0.17-0.19	0.0-2.9	0.0-0.8	.20	.20			
	32-39	43-90	2-35	2-25	1.50-1.80	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
	39-46	43-90	2-40	2-25	1.50-1.80	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	46-80	43-95	1-25	1-15	1.50-1.80	2-100	0.05-0.13	0.0-1.0	0.0-0.5	.10	.10			
UoE:														
Udorthents----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Ur:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
UsB:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Sassafras-----------	0-9	23-85	2-45	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-2.5	.37	.37	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors			Wind erodi-bility group	Wind erodi-bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
UsB:														
Beltsville----------	0-3	10-50	50-72	7-25	0.75-1.55	0.6-2	0.19-0.24	0.0-5.7	1.0-15	.37	.37	4	5	56
	3-8	1-52	28-80	7-25	1.45-1.55	0.2-0.6	0.17-0.22	0.0-2.9	0.0-1.0	.49	.49			
	8-20	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.49	.49			
	20-41	15-80	15-70	7-35	1.65-1.90	0.00-0.06	0.13-0.20	0.0-2.9	0.0-0.5	.37	.32			
	41-65	15-80	8-70	10-40	1.55-1.80	0.00-0.2	0.09-0.20	0.0-2.9	0.0-0.5	.15	.15			
	65-71	5-85	1-70	10-40	1.45-1.70	0.2-0.6	0.06-0.20	0.0-5.0	0.0-0.5	.15	.15			
	71-76	5-85	1-70	5-40	1.45-1.70	0.2-6	0.06-0.20	0.0-2.9	0.0-0.5	.24	.20			
UsD:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Sassafras-----------	0-9	23-85	2-45	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-2.5	.37	.37	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
Beltsville----------	0-3	10-50	50-72	7-25	0.75-1.55	0.6-2	0.19-0.24	0.0-5.7	1.0-15	.37	.37	4	5	56
	3-8	1-52	28-80	7-25	1.45-1.55	0.2-0.6	0.17-0.22	0.0-2.9	0.0-1.0	.49	.49			
	8-20	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.49	.49			
	20-41	15-80	15-70	7-35	1.65-1.90	0.00-0.06	0.13-0.20	0.0-2.9	0.0-0.5	.37	.32			
	41-65	15-80	8-70	10-40	1.55-1.80	0.00-0.2	0.09-0.20	0.0-2.9	0.0-0.5	.15	.15			
	65-71	5-85	1-70	10-40	1.45-1.70	0.2-0.6	0.06-0.20	0.0-5.0	0.0-0.5	.15	.15			
	71-76	5-85	1-70	5-40	1.45-1.70	0.2-6	0.06-0.20	0.0-2.9	0.0-0.5	.24	.20			
UtD:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Udorthents----------	0-2	45-85	20-50	6-15	1.50-1.60	0.06-0.6	0.10-0.13	0.0-2.9	1.0-2.0	.28	.28	5	3	86
	2-65	50-75	10-30	8-20	1.50-1.60	0.06-0.6	0.12-0.15	3.0-5.9	1.0-2.0	.28	.28			
UuB:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Udorthents----------	0-3	35-50	20-40	15-25	1.00-1.45	0.06-0.6	0.14-0.18	0.0-2.9	1.0-2.0	.28	.28	4	5	56
	3-40	30-50	30-55	25-35	1.30-1.60	0.06-0.2	0.14-0.20	3.0-5.9	1.0-2.0	.37	.37			
	40-65	---	---	---	---	---	---	---	---	---	---			
UuD:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Udorthents----------	0-3	35-50	20-40	15-25	1.00-1.45	0.06-0.6	0.14-0.18	0.0-2.9	1.0-2.0	.28	.28	4	5	56
	3-40	30-50	30-55	25-35	1.30-1.60	0.06-0.2	0.14-0.20	3.0-5.9	1.0-2.0	.37	.37			
	40-65	---	---	---	---	---	---	---	---	---	---			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors: Kw	Erosion factors: Kf	Erosion factors: T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
UwC:														
Urban land----------	---	---	---	---	---	---	---	---	---	---	---	--	---	---
Woodstown-----------	0-7	25-85	2-50	5-18	1.00-1.75	0.6-6	0.10-0.19	0.0-2.9	1.0-3.0	.17	.17	5	3	86
	7-11	43-85	2-50	5-18	1.35-1.75	2-6	0.10-0.16	0.0-2.9	0.0-1.0	.32	.32			
	11-29	25-80	2-50	18-35	1.40-1.75	0.6-2	0.14-0.19	0.0-2.9	0.0-0.5	.28	.28			
	29-45	43-98	2-50	2-18	1.50-1.75	2-100	0.04-0.13	0.0-2.9	0.0-0.5	.24	.24			
	45-80	43-98	2-50	1-18	1.50-1.60	2-100	0.04-0.13	0.0-2.9	0.0-0.5	.20	.20			
Sassafras-----------	0-9	23-85	2-45	8-18	1.50-1.80	0.6-6	0.13-0.19	0.0-1.5	0.5-2.5	.37	.37	5	3	86
	9-15	23-90	5-50	2-20	1.45-1.75	0.6-20	0.10-0.19	0.0-2.9	0.0-0.5	.24	.24			
	15-30	23-85	10-50	18-35	1.45-1.75	0.6-2	0.16-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-37	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.20	.20			
	37-80	43-98	2-50	2-20	1.45-1.75	2-100	0.05-0.13	0.0-2.9	0.0-0.5	.17	.17			
WaA:														
Watchung------------	0-9	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.28	.32	5	6	48
	9-33	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.55	.55			
	33-54	20-40	30-60	15-35	1.20-1.50	0.06-2	0.12-0.21	3.0-5.9	0.0-0.5	.28	.28			
	54-65	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
WcB:														
Watchung------------	0-9	15-52	28-80	10-40	1.45-1.60	0.1-2	0.17-0.22	0.0-2.9	0.0-0.5	.28	.32	5	6	48
	9-33	5-30	28-60	32-58	1.40-1.50	0.2-0.6	0.07-0.19	3.0-5.9	0.0-0.8	.55	.55			
	33-54	20-40	30-60	15-35	1.20-1.50	0.06-2	0.12-0.21	3.0-5.9	0.0-0.5	.28	.28			
	54-65	5-52	15-60	18-40	1.40-1.60	0.06-0.6	0.14-0.18	0.0-2.9	0.0-0.5	.24	.24			
WgB:														
Wheaton-------------	0-6	10-30	50-65	18-27	1.45-1.65	0.6-2	0.13-0.21	0.0-2.9	1.0-2.0	.20	.24	5	5	56
	6-68	20-45	30-50	18-27	1.45-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.20	.32			
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			
WgD:														
Wheaton-------------	0-6	10-30	50-65	18-27	1.45-1.65	0.6-2	0.13-0.21	0.0-2.9	1.0-2.0	.20	.24	5	6	48
	6-68	20-45	30-50	18-27	1.45-1.70	0.6-2	0.11-0.19	0.0-2.9	0.0-0.5	.20	.32			
Glenelg-------------	0-10	30-65	30-50	15-25	1.10-1.40	0.6-2	0.14-0.24	0.0-2.9	1.0-3.0	.20	.28	5	6	48
	10-30	10-52	15-85	18-35	1.40-1.55	0.2-2	0.17-0.20	0.0-2.9	0.0-0.5	.37	.37			
	30-54	40-60	20-50	10-25	1.10-1.40	0.6-2	0.17-0.21	0.0-2.9	1.0-3.0	.24	.28			
	54-76	50-80	10-30	5-25	1.20-1.40	0.6-2	0.10-0.20	0.0-2.9	0.0-0.5	.28	.32			

Table 18.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permeability (K_{sat})	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	In/hr	In/in	Pct	Pct					
WhA:														
Wiltshire----------	0-10	10-30	40-70	18-27	1.10-1.30	0.6-2	0.16-0.20	0.0-2.9	1.0-3.0	.24	.37	4	6	48
	10-29	10-30	40-70	20-35	1.30-1.50	0.6-2	0.12-0.16	0.0-2.9	0.1-1.0	.32	.32			
	29-43	20-40	40-70	20-30	1.40-1.70	0.06-0.2	0.16-0.20	0.0-2.9	0.1-0.5	.49	.49			
	43-98	20-60	25-55	15-30	1.30-1.50	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.15	.37			
WhB:														
Wiltshire----------	0-10	10-30	40-70	18-27	1.10-1.30	0.6-2	0.16-0.20	0.0-2.9	1.0-3.0	.24	.37	4	6	48
	10-29	10-30	40-70	20-35	1.30-1.50	0.6-2	0.12-0.16	0.0-2.9	0.1-1.0	.32	.32			
	29-43	20-40	40-70	20-30	1.40-1.70	0.06-0.2	0.16-0.20	0.0-2.9	0.1-0.5	.49	.49			
	43-98	20-60	25-55	15-30	1.30-1.50	0.2-2	0.06-0.12	0.0-2.9	0.0-0.5	.15	.37			
WoA:														
Woodstown----------	0-10	50-75	20-35	5-15	1.25-1.75	0.6-6	0.11-0.15	0.0-2.9	1.0-10	.24	.24	5	3	86
	10-22	20-85	2-50	5-40	1.45-1.55	0.6-2	0.14-0.16	0.0-2.9	0.0-1.0	.24	.24			
	22-35	20-85	2-50	18-40	1.50-1.60	0.6-2	0.08-0.16	0.0-2.9	0.0-0.5	.10	.37			
	35-60	25-90	2-50	2-18	1.50-1.65	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.28			
WoB:														
Woodstown----------	0-10	50-75	20-35	5-15	1.25-1.75	0.6-6	0.11-0.15	0.0-2.9	1.0-10	.24	.24	5	3	86
	10-22	20-85	2-50	5-40	1.45-1.55	0.6-2	0.14-0.16	0.0-2.9	0.0-1.0	.24	.24			
	22-35	20-85	2-50	18-40	1.50-1.60	0.6-2	0.08-0.16	0.0-2.9	0.0-0.5	.10	.37			
	35-60	25-90	2-50	2-18	1.50-1.65	2-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.28			
ZbA:														
Zekiah-------------	0-3	10-50	50-75	7-25	0.75-1.55	0.6-2	0.19-0.26	0.2-2.9	1.0-30	.37	.37	5	5	56
	3-20	5-50	30-78	8-18	1.20-1.50	0.6-2	0.15-0.29	0.0-2.9	0.5-5.0	.55	.55			
	20-27	23-85	5-50	2-15	1.30-1.50	0.6-6	0.10-0.19	0.0-2.9	3.0-8.0	.17	.17			
	27-37	23-90	5-50	2-15	1.30-1.60	0.6-6	0.10-0.19	0.0-2.9	0.5-5.0	.24	.24			
	37-50	23-90	5-50	2-15	1.30-1.60	0.6-20	0.10-0.19	0.0-2.9	0.5-5.0	.28	.28			
	50-80	50-98	0-45	1-8	1.50-1.70	2-100	0.04-0.13	0.0-2.9	0.5-5.0	.10	.10			
Issue--------------	0-4	10-85	0-85	3-38	1.40-1.50	0.6-2	0.15-0.24	0.0-2.9	1.0-7.0	.37	.37	5	6	48
	4-19	20-82	0-85	5-27	1.40-1.55	0.6-2	0.17-0.22	0.0-2.9	0.1-2.0	.37	.37			
	19-30	20-85	0-85	0-27	1.40-1.55	0.6-2	0.07-0.22	0.0-2.9	0.1-2.0	.37	.37			
	30-58	50-100	0-50	0-20	1.40-1.60	2-20	0.05-0.16	0.0-2.9	0.1-2.0	.37	.37			
	58-70	10-85	0-80	5-27	1.40-1.50	0.6-2	0.12-0.24	0.0-2.9	1.0-5.0	.37	.37			

Table 19.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated.)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
AwB:				
Alloway	0-3	4.0-30	2.0-14	4.0-6.0
	3-8	2.0-28	1.0-10	4.0-6.0
	8-20	2.0-28	2.0-15	4.0-6.0
	20-33	2.0-28	2.0-15	4.0-6.0
	33-49	2.0-28	2.0-15	4.0-6.0
	49-71	2.0-28	2.0-10	4.0-6.0
	71-75	2.0-28	2.0-10	4.0-6.0
BaA:				
Baile	0-9	13-17	4.5-13	4.5-7.3
	9-32	7.0-11	2.0-8.2	4.5-5.5
	32-65	9.0-13	2.0-5.5	4.5-5.5
BeA:				
Benevola	0-8	7.2-13	---	6.1-7.3
	8-33	11-20	---	6.1-7.3
	33-57	11-20	---	6.1-7.3
	57-115	11-20	---	6.1-7.3
BeB:				
Benevola	0-8	7.2-13	---	6.1-7.3
	8-33	11-20	---	6.1-7.3
	33-57	11-20	---	6.1-7.3
	57-115	11-20	---	6.1-7.3
BeC:				
Benevola	0-8	7.2-13	---	6.1-7.3
	8-33	11-20	---	6.1-7.3
	33-57	11-20	---	6.1-7.3
	57-115	11-20	---	6.1-7.3
BrC:				
Brinklow	0-10	13-17	4.5-13	4.5-6.0
	10-25	7.0-11	3.8-7.4	4.5-5.5
	25-35	---	---	---
	35-39	---	---	---
BrD:				
Brinklow	0-10	13-17	4.5-13	4.5-6.0
	10-25	7.0-11	3.8-7.4	4.5-5.5
	25-35	---	---	---
	35-39	---	---	---
BtF:				
Brinklow	0-10	13-17	4.5-13	4.5-6.0
	10-25	7.0-11	3.8-7.4	4.5-5.5
	25-35	---	---	---
	35-39	---	---	---
Blocktown	0-6	13-17	4.5-13	4.5-6.0
	6-17	13-17	4.5-13	4.5-5.5
	17-21	---	---	---
	21-25	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
CeB:				
Chillum--------------	0-2	---	16-20	4.5-5.5
	2-9	---	2.6-17	4.5-5.5
	9-12	---	1.0-5.0	4.5-5.5
	12-24	---	3.5-8.4	4.5-5.5
	24-34	---	0.1-1.0	4.5-5.5
	34-72	---	0.9-8.4	4.5-5.5
CeC:				
Chillum--------------	0-2	---	16-20	4.5-5.5
	2-9	---	2.6-17	4.5-5.5
	9-12	---	1.0-5.0	4.5-5.5
	12-24	---	3.5-8.4	4.5-5.5
	24-34	---	0.1-1.0	4.5-5.5
	34-72	---	0.9-8.4	4.5-5.5
ChB:				
Chillum--------------	0-2	---	16-20	4.5-5.5
	2-9	---	2.6-17	4.5-5.5
	9-12	---	1.0-5.0	4.5-5.5
	12-24	---	3.5-8.4	4.5-5.5
	24-34	---	0.1-1.0	4.5-5.5
	34-72	---	0.9-8.4	4.5-5.5
Russett--------------	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
ChC:				
Chillum--------------	0-2	---	16-20	4.5-5.5
	2-9	---	2.6-17	4.5-5.5
	9-12	---	1.0-5.0	4.5-5.5
	12-24	---	3.5-8.4	4.5-5.5
	24-34	---	0.1-1.0	4.5-5.5
	34-72	---	0.9-8.4	4.5-5.5
Russett--------------	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
Co:				
Codorus--------------	0-11	8.2-15	6.2-11	4.5-6.0
	11-18	---	1.2-6.4	4.5-6.0
	18-40	---	1.2-6.4	4.5-5.5
	40-60	---	1.2-6.4	4.5-5.5
Hatboro--------------	0-11	---	6.0-14	4.5-7.3
	11-44	---	7.0-16	4.5-7.3
	44-55	2.0-28	2.0-13	4.5-7.3
	55-60	---	2.0-20	5.6-6.5
Cp:				
Codorus, frequently flooded------------	0-1	4.0-30	2.0-15	3.7-7.2
	1-57	9.1-18	3.1-12	4.5-6.0
	57-63	2.6-6.4	3.1-14	4.5-6.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
Cp:				
Hatboro, frequently flooded	0-2	40-90	35-85	4.5-6.5
	2-8	4.0-30	2.0-15	4.0-5.5
	8-18	3.8-9.9	3.0-11	4.0-5.0
	18-66	2.5-9.9	3.0-16	4.0-5.0
CrD:				
Croom	0-1	4.0-12	1.2-3.7	4.0-6.0
	1-9	2.9-13	1.2-4.9	4.0-6.0
	9-13	2.5-11	1.9-9.7	4.0-6.0
	13-30	2.0-11	1.5-9.7	4.0-6.0
	30-54	2.0-11	1.5-9.7	4.0-6.0
	54-66	0.8-8.6	0.5-7.2	4.0-6.0
	66-80	0.5-6.1	0.3-4.7	4.0-6.0
Evesboro	0-4	1.0-80	0.1-80	4.3-6.5
	4-16	0.0-5.0	0.1-1.0	4.3-5.5
	16-39	0.0-5.0	0.1-2.0	4.3-5.5
	39-80	0.0-5.0	0.1-1.0	4.3-5.5
DhB:				
Downer	0-11	2.0-15	1.0-10	4.3-6.8
	11-35	1.0-5.0	0.1-5.0	4.3-6.0
	35-80	0.1-3.0	0.5-3.0	4.3-5.8
Hammonton	0-11	2.0-15	1.0-10	4.3-6.8
	11-30	1.0-5.0	0.1-5.0	4.3-6.0
	30-80	0.1-3.0	0.5-3.0	4.3-5.8
DhC:				
Downer	0-11	2.0-15	1.0-10	4.3-6.8
	11-35	1.0-5.0	0.1-5.0	4.3-6.0
	35-80	0.1-3.0	0.5-3.0	4.3-5.8
Hammonton	0-11	2.0-15	1.0-10	4.3-6.8
	11-30	1.0-5.0	0.1-5.0	4.3-6.0
	30-80	0.1-3.0	0.5-3.0	4.3-5.8
DhD:				
Downer	0-11	2.0-15	1.0-10	4.3-6.8
	11-35	1.0-5.0	0.1-5.0	4.3-6.0
	35-80	0.1-3.0	0.5-3.0	4.3-5.8
Hammonton	0-11	2.0-15	1.0-10	4.3-6.8
	11-30	1.0-5.0	0.1-5.0	4.3-6.0
	30-80	0.1-3.0	0.5-3.0	4.3-5.8
DxC:				
Downer	0-11	2.0-15	1.0-10	4.3-6.8
	11-35	1.0-5.0	0.1-5.0	4.3-6.0
	35-80	0.1-3.0	0.5-3.0	4.3-5.8
Phalanx	0-11	---	0.3-2.9	3.5-5.0
	11-15	---	0.3-3.9	3.5-5.0
	15-22	---	0.4-4.2	3.5-5.0
	22-28	---	0.4-7.6	3.5-5.0
	28-33	---	0.4-7.6	3.5-5.0
	33-38	---	0.0-7.6	3.5-5.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
EaB:				
Elioak	0-6	3.8-9.4	0.5-0.6	5.5-7.3
	6-15	---	3.9-7.2	4.5-6.0
	15-42	---	0.5-0.6	4.5-5.8
	42-60	---	0.4-0.6	4.5-5.5
EbC:				
Evesboro	0-4	1.0-80	0.1-80	4.3-6.5
	4-16	0.0-5.0	0.1-1.0	4.3-6.5
	16-39	0.0-5.0	0.1-2.0	4.3-5.5
	39-80	0.0-5.0	0.1-1.0	4.3-5.5
Fa:				
Fallsington, undrained	0-2	40-80	30-70	4.3-5.3
	2-10	5.0-15	2.0-5.0	4.3-5.5
	10-32	5.0-20	1.0-15	4.3-5.5
	32-39	0.0-15	0.0-10	4.3-5.8
	39-46	2.0-15	1.0-3.0	4.3-5.8
	46-80	0.2-5.0	0.1-2.0	4.3-5.8
GaC:				
Gaila	0-8	---	1.2-6.4	5.5-7.3
	8-17	10-16	4.3-12	4.5-6.0
	17-20	10-16	4.3-12	4.5-6.0
	20-76	---	0.0-35	4.5-5.5
GaD:				
Gaila	0-8	---	1.2-6.4	5.5-7.3
	8-17	10-16	4.3-12	4.5-6.0
	17-20	10-16	4.3-12	4.5-6.0
	20-76	---	0.0-35	4.5-5.5
GbA:				
Gladstone	0-8	5.5-15	5.2-12	5.5-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
GbB:				
Gladstone	0-8	5.5-15	5.2-12	5.5-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
GbC:				
Gladstone	0-8	5.5-15	5.2-12	5.5-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
GcB:				
Gladstone	0-8	5.5-15	5.2-12	5.5-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
Legore	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
GcC:				
Gladstone-----------	0-8	5.5-15	5.2-12	5.4-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
Legore--------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
GdC:				
Gladstone-----------	0-8	5.5-15	5.2-12	5.4-6.5
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
Legore--------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
GdD:				
Gladstone-----------	0-8	5.5-15	5.2-12	5.4-6.5
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
Legore--------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
GfB:				
Gladstone-----------	0-8	5.5-15	5.2-12	5.4-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
Urban land----------	---	---	---	---
GfC:				
Gladstone-----------	0-8	5.5-15	5.2-12	5.4-7.3
	8-30	---	5.7-18	4.5-5.5
	30-75	---	1.3-9.5	4.5-5.5
Urban land----------	---	---	---	---
GgA:				
Glenelg-------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
GgB:				
Glenelg-------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
GgC:				
Glenelg--------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
GhB:				
Glenelg--------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
Urban land-----------	---	---	---	---
GhC:				
Glenelg--------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
Urban land-----------	---	---	---	---
	0-10	6.0-13	2.6-4.7	5.0-6.5
	10-42	6.7-11	5.0-9.1	4.5-6.0
	42-54	1.7-8.9	1.2-7.4	4.5-5.5
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
GmA:				
Glenville------------	0-8	5.5-11	---	5.5-7.3
	8-30	2.5-9.9	6.4-18	4.5-6.0
	30-40	---	6.4-18	4.5-5.5
	40-70	---	1.3-12	4.5-5.5
GmB:				
Glenville------------	0-8	5.5-11	---	5.5-7.3
	8-30	2.5-9.9	6.4-18	4.5-6.0
	30-40	---	6.4-18	4.5-5.5
	40-70	---	1.3-12	4.5-5.5
GmC:				
Glenville------------	0-8	5.5-11	---	5.5-7.3
	8-30	2.5-9.9	6.4-18	4.5-6.0
	30-40	---	6.4-18	4.5-5.5
	40-70	---	1.3-12	4.5-5.5
GnB:				
Glenville------------	0-8	5.5-11	---	5.5-7.3
	8-30	2.5-9.9	6.4-18	4.5-6.0
	30-40	---	6.4-18	4.5-5.5
	40-70	---	1.3-12	4.5-5.5
Baile----------------	0-9	13-17	4.5-13	4.5-7.3
	9-32	7.0-11	2.0-8.2	4.5-5.5
	32-65	9.0-13	2.0-5.5	4.5-5.5
GoB:				
Glenville------------	0-8	5.5-11	---	5.5-7.3
	8-30	2.5-9.9	6.4-18	4.5-6.0
	30-40	---	6.4-18	4.5-5.5
	40-70	---	1.3-12	4.5-5.5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
GoB:				
Codorus--------------	0-11	8.2-15	6.2-11	4.5-6.0
	11-18	---	1.2-6.4	4.5-6.0
	18-40	---	1.2-6.4	4.5-5.5
	40-60	---	1.2-6.4	4.5-5.5
GuB:				
Glenville------------	0-8	5.5-11	---	5.5-7.3
	8-30	2.5-9.9	6.4-18	4.5-6.0
	30-40	---	6.4-18	4.5-5.5
	40-70	---	1.3-12	4.5-5.5
Urban land-----------	---	---	---	---
Udorthents-----------	0-3	11-18	---	5.1-6.5
	3-40	17-25	---	5.1-6.5
	40-65	---	---	---
Ha:				
Hatboro--------------	0-11	---	6.0-14	4.5-7.3
	11-44	---	7.0-16	4.5-7.3
	44-55	2.0-28	2.0-13	4.5-7.3
	55-60	---	2.0-20	5.6-6.5
Codorus--------------	0-11	8.2-15	6.2-11	4.5-6.0
	11-18	---	1.2-6.4	4.5-6.0
	18-40	---	1.2-6.4	4.5-5.5
	40-60	---	1.2-6.4	4.5-5.5
JaB:				
Jackland-------------	0-8	6.0-16	7.8-18	5.4-6.5
	8-41	9.4-36	5.8-14	4.5-7.3
	41-65	10-14	---	4.5-7.8
LaB:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
LaC:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
LeB:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
LeC:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
LmB:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
Montalto-------------	0-4	9.7-19	5.1-12	4.5-6.5
	4-8	7.2-13	---	5.1-6.5
	8-43	16-29	5.8-12	5.1-6.5
	43-72	12-18	---	5.1-6.5
LoB:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
Montalto-------------	0-4	9.7-19	5.1-12	4.5-6.5
	4-8	7.2-13	---	5.1-6.5
	8-43	16-29	5.8-12	5.1-6.5
	43-72	12-18	---	5.1-6.5
Urban land-----------	---	---	---	---
LoC:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
Montalto-------------	0-4	9.7-19	5.1-12	4.5-6.5
	4-8	7.2-13	---	5.1-6.5
	8-43	16-29	5.8-12	5.1-6.5
	43-72	12-18	---	5.1-6.5
Urban land-----------	---	---	---	---
LrD:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
LrD:				
Relay----------------	0-6	---	1.2-6.4	5.0-6.0
	6-15	2.0-28	1.0-10	5.0-6.0
	15-30	5.0-15	6.0-16	5.0-6.0
	30-40	---	1.3-9.6	5.0-6.0
	40-65	1.0-5.0	1.0-4.0	4.5-5.5
LrF:				
Legore---------------	0-1	40-80	30-70	4.5-5.5
	1-2	---	1.2-6.4	5.1-6.5
	2-11	---	1.2-6.4	5.6-6.5
	11-27	2.0-28	2.0-13	5.6-6.5
	27-52	13-17	4.5-13	5.6-6.5
	52-72	---	0.0-35	5.1-6.0
Relay----------------	0-6	---	1.2-6.4	5.0-6.0
	6-15	2.0-28	1.0-10	5.0-6.0
	15-30	5.0-15	6.0-16	5.0-6.0
	30-40	---	1.3-9.6	5.0-6.0
	40-65	1.0-5.0	1.0-4.0	4.5-5.5
MaB:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5
MaC:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5
MaD:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5
McD:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5
MgD:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5
Bannertown-----------	0-4	4.7-14	2.0-8.0	4.5-6.0
	4-11	2.7-8.8	1.0-5.0	4.5-6.0
	11-21	---	1.0-5.0	4.5-5.5
	21-34	---	1.0-5.0	4.5-5.5
	34-37	---	---	---
	37-80	---	---	---
MgF:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
MgF:				
Bannertown-----------	0-4	4.7-14	2.0-8.0	4.5-6.0
	4-11	2.7-8.8	1.0-5.0	4.5-6.0
	11-21	---	1.0-5.0	4.5-5.5
	21-34	---	1.0-5.0	4.5-5.5
	34-37	---	---	---
	37-80	---	---	---
MkF:				
Manor----------------	0-6	10-16	4.3-12	4.5-7.3
	6-22	9.0-15	2.6-6.1	4.5-5.5
	22-72	2.0-10	1.5-8.0	4.5-5.5
Brinklow-------------	0-10	13-17	4.5-13	4.5-6.0
	10-25	7.0-11	3.8-7.4	4.5-5.5
	25-35	---	---	---
	35-39	---	---	---
MoB:				
Mount Lucas----------	0-9	8.9-17	5.4-13	5.1-6.5
	9-38	13-25	6.5-13	5.1-7.3
	38-60	4.0-22	6.5-11	5.6-7.3
MoC:				
Mount Lucas----------	0-9	8.9-17	5.4-13	5.1-6.5
	9-38	13-25	6.5-13	5.1-7.3
	38-60	4.0-22	6.5-11	5.6-7.3
OcB:				
Occoquan-------------	0-8	4.0-14	3.0-10	4.5-7.3
	8-24	---	3.3-7.6	4.5-5.5
	24-59	---	0.9-5.8	4.5-5.5
	59-63	---	---	---
OcC:				
Occoquan-------------	0-8	4.0-14	3.0-10	4.5-7.3
	8-24	---	3.3-7.6	4.5-5.5
	24-59	---	0.9-5.8	4.5-5.5
	59-63	---	---	---
PfC:				
Patapsco-------------	0-10	---	0.1-1.8	3.5-5.5
	10-61	---	0.0-3.4	3.5-5.5
	61-74	---	1.6-5.6	3.5-5.5
	74-80	---	1.6-9.0	3.5-5.5
Fort Mott------------	0-10	1.5-7.0	1.0-6.0	4.3-6.8
	10-24	0.5-6.0	0.5-5.0	4.3-6.8
	24-36	0.0-8.0	0.3-3.0	4.3-6.0
	36-80	0.0-3.0	0.0-2.0	4.3-5.8
RsB:				
Russett--------------	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
RsC:				
Russett	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
RsD:				
Russett	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
RtB:				
Russett	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
Alloway	0-3	4.0-30	2.0-14	4.0-6.0
	3-8	2.0-28	1.0-10	4.0-6.0
	8-20	2.0-28	2.0-15	4.0-6.0
	20-33	2.0-28	2.0-15	4.0-6.0
	33-49	2.0-28	2.0-15	4.0-6.0
	49-71	2.0-28	2.0-10	4.0-6.0
	71-75	2.0-28	2.0-10	4.0-6.0
Hambrook	0-10	2.0-10	1.5-8.0	4.3-6.8
	10-14	2.0-10	1.5-8.0	4.3-6.8
	14-28	3.0-15	2.0-10	4.3-6.0
	28-65	1.0-10	0.5-8.0	4.3-5.8
	65-80	0.5-10	0.2-8.0	4.3-5.8
RtC:				
Russett	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
Alloway	0-3	4.0-30	2.0-14	4.0-6.0
	3-8	2.0-28	1.0-10	4.0-6.0
	8-20	2.0-28	2.0-15	4.0-6.0
	20-33	2.0-28	2.0-15	4.0-6.0
	33-49	2.0-28	2.0-15	4.0-6.0
	49-71	2.0-28	2.0-10	4.0-6.0
	71-75	2.0-28	2.0-10	4.0-6.0
Hambrook	0-10	2.0-10	1.5-8.0	4.3-6.8
	10-14	2.0-10	1.5-8.0	4.3-6.8
	14-28	3.0-15	2.0-10	4.3-6.0
	28-65	1.0-10	0.5-8.0	4.3-5.8
	65-80	0.5-10	0.2-8.0	4.3-5.8

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
RtD:				
Russett--------------	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
Alloway--------------	0-3	4.0-30	2.0-14	4.0-6.0
	3-8	2.0-28	1.0-10	4.0-6.0
	8-20	2.0-28	2.0-15	4.0-6.0
	20-33	2.0-28	2.0-15	4.0-6.0
	33-49	2.0-28	2.0-15	4.0-6.0
	49-71	2.0-28	2.0-10	4.0-6.0
	71-75	2.0-28	2.0-10	4.0-6.0
Hambrook-------------	0-10	2.0-10	1.5-8.0	4.3-6.8
	10-14	2.0-10	1.5-8.0	4.3-6.8
	14-28	3.0-15	2.0-10	4.3-6.0
	28-65	1.0-10	0.5-8.0	4.3-5.8
	65-80	0.5-10	0.2-8.0	4.3-5.8
RuB:				
Russett--------------	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
Beltsville-----------	0-3	---	2.0-15	3.6-7.2
	3-8	---	0.8-19	3.6-5.5
	8-20	---	1.9-9.7	3.6-5.5
	20-41	---	1.3-8.4	3.6-5.5
	41-65	---	1.9-9.7	3.6-5.5
	65-71	---	1.9-9.7	3.6-5.5
	71-76	---	0.9-9.7	3.6-5.5
RuC:				
Russett--------------	0-4	---	1.2-15	3.5-5.0
	4-7	---	1.2-7.1	3.5-5.0
	7-13	---	1.3-9.6	3.5-5.0
	13-46	---	3.5-9.6	3.5-5.0
	46-57	---	0.9-10	3.5-5.0
	57-77	---	0.9-10	3.5-5.0
Beltsville-----------	0-3	---	2.0-15	3.6-7.2
	3-8	---	0.8-19	3.6-5.5
	8-20	---	1.9-9.7	3.6-5.5
	20-41	---	1.3-8.4	3.6-5.5
	41-65	---	1.9-9.7	3.6-5.5
	65-71	---	1.9-9.7	3.6-5.5
	71-76	---	0.9-9.7	3.6-5.5
SaB:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
SaC:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
SfB:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
SrC:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
Croom----------------	0-1	4.0-12	1.2-3.7	4.0-6.0
	1-9	2.9-13	1.2-4.9	4.0-6.0
	9-13	2.5-11	1.9-9.7	4.0-6.0
	13-30	2.0-11	1.5-9.7	4.0-6.0
	30-54	2.0-11	1.5-9.7	4.0-6.0
	54-66	0.8-8.6	0.5-7.2	4.0-6.0
	66-80	0.5-6.1	0.3-4.7	4.0-6.0
SrD:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
Croom----------------	0-1	4.0-12	1.2-3.7	4.0-6.0
	1-9	2.9-13	1.2-4.9	4.0-6.0
	9-13	2.5-11	1.9-9.7	4.0-6.0
	13-30	2.0-11	1.5-9.7	4.0-6.0
	30-54	2.0-11	1.5-9.7	4.0-6.0
	54-66	0.8-8.6	0.5-7.2	4.0-6.0
	66-80	0.5-6.1	0.3-4.7	4.0-6.0
SrE:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
Croom----------------	0-1	3.0-8.8	1.2-7.0	4.0-6.0
	1-9	1.8-9.2	1.2-4.9	4.0-6.0
	9-13	0.2-3.1	1.9-9.7	4.0-6.0
	13-30	0.3-4.1	1.5-9.7	4.0-6.0
	30-54	1.0-5.1	1.5-9.7	4.0-6.0
	54-66	0.8-5.1	0.5-7.2	4.0-6.0
	66-80	0.8-5.1	0.3-4.7	4.0-6.0
UaF:				
Udorthents-----------	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
UbF:				
Udorthents-----------	---	---	---	---
UcB:				
Urban land-----------	---	---	---	---
Chillum-------------	0-2	---	16-20	4.5-5.5
	2-9	---	2.6-17	4.5-5.5
	9-12	---	1.0-5.0	4.5-5.5
	12-24	---	3.5-8.4	4.5-5.5
	24-34	---	0.1-1.0	4.5-5.5
	34-72	---	0.9-8.4	4.5-5.5
Beltsville-----------	0-3	---	2.0-15	3.6-7.2
	3-8	---	0.8-19	3.6-5.5
	8-20	---	1.9-9.7	3.6-5.5
	20-41	---	1.3-8.4	3.6-5.5
	41-65	---	1.9-9.7	3.6-5.5
	65-71	---	1.9-9.7	3.6-5.5
	71-76	---	0.9-9.7	3.6-5.5
UcD:				
Urban land-----------	---	---	---	---
Chillum-------------	0-2	---	16-20	4.5-5.5
	2-9	---	2.6-17	4.5-5.5
	9-12	---	1.0-5.0	4.5-5.5
	12-24	---	3.5-8.4	4.5-5.5
	24-34	---	0.1-1.0	4.5-5.5
	34-72	---	0.9-8.4	4.5-5.5
Beltsville-----------	0-3	---	2.0-15	3.6-7.2
	3-8	---	0.8-19	3.6-5.5
	8-20	---	1.9-9.7	3.6-5.5
	20-41	---	1.3-8.4	3.6-5.5
	41-65	---	1.9-9.7	3.6-5.5
	65-71	---	1.9-9.7	3.6-5.5
	71-76	---	0.9-9.7	3.6-5.5
UdB:				
Udorthents-----------	0-2	---	2.1-4.5	4.5-5.0
	2-65	---	2.3-4.9	4.5-5.0
UfA:				
Urban land-----------	---	---	---	---
Fallsington, undrained-----------	0-2	40-80	30-70	4.3-5.3
	2-10	5.0-15	2.0-5.0	4.3-5.5
	10-32	5.0-20	1.0-15	4.3-5.5
	32-39	0.0-15	0.0-10	4.3-5.8
	39-46	2.0-15	1.0-3.0	4.3-5.8
	46-80	0.2-5.0	0.1-2.0	4.3-5.8
UoE:				
Udorthents-----------	---	---	---	---
Ur:				
Urban land-----------	---	---	---	---

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
UsB:				
Urban land	---	---	---	---
Sassafras	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
Beltsville	0-3	---	2.0-15	3.6-7.2
	3-8	---	0.8-19	3.6-5.5
	8-20	---	1.9-9.7	3.6-5.5
	20-41	---	1.3-8.4	3.6-5.5
	41-65	---	1.9-9.7	3.6-5.5
	65-71	---	1.9-9.7	3.6-5.5
	71-76	---	0.9-9.7	3.6-5.5
UsD:				
Urban land	---	---	---	---
Sassafras	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
Beltsville	0-3	---	2.0-15	3.6-7.2
	3-8	---	0.8-19	3.6-5.5
	8-20	---	1.9-9.7	3.6-5.5
	20-41	---	1.3-8.4	3.6-5.5
	41-65	---	1.9-9.7	3.6-5.5
	65-71	---	1.9-9.7	3.6-5.5
	71-76	---	0.9-9.7	3.6-5.5
UtD:				
Urban land	---	---	---	---
Udorthents	0-2	---	2.8-6.2	4.5-5.0
	2-65	---	3.2-8.7	4.5-5.0
UuB:				
Urban land	---	---	---	---
Udorthents	0-3	11-18	2.8-5.2	5.1-6.5
	3-40	17-24	3.6-6.0	5.1-6.5
	40-65	---	---	---
UuD:				
Urban land	---	---	---	---
Udorthents	0-3	11-18	2.8-5.2	5.1-6.5
	3-40	17-24	3.6-6.0	5.1-6.5
	40-65	---	---	---
UwC:				
Urban land	---	---	---	---
Woodstown	0-7	2.0-10	2.0-10	4.3-6.8
	7-11	0.5-8.0	0.5-8.0	4.3-6.8
	11-29	4.0-15	4.0-15	4.3-6.0
	29-45	1.0-6.0	1.0-6.0	4.3-5.8
	45-80	0.5-5.0	0.5-5.0	4.3-5.8

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
UwC:				
Sassafras------------	0-9	2.0-10	1.5-8.0	4.3-6.8
	9-15	2.0-10	1.5-8.0	4.3-6.8
	15-30	3.0-15	2.0-10	4.3-6.0
	30-37	1.0-10	0.5-8.0	4.3-5.8
	37-80	0.5-10	0.2-8.0	4.3-5.8
WaA:				
Watchung-------------	0-9	---	1.9-9.7	5.0-6.5
	9-33	11-20	---	6.0-6.5
	33-54	6.0-10	---	6.0-7.3
	54-65	---	3.5-9.6	6.0-7.3
WcB:				
Watchung-------------	0-9	---	1.9-9.7	5.0-6.5
	9-33	11-20	---	6.0-6.5
	33-54	6.0-10	---	6.0-7.3
	54-65	---	3.5-9.6	6.0-7.3
WgB:				
Wheaton--------------	0-6	4.0-7.2	3.2-5.1	4.5-6.0
	6-68	1.8-3.8	1.4-2.9	4.5-6.0
Glenelg--------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
WgD:				
Wheaton--------------	0-6	4.0-7.2	3.2-5.1	4.5-6.0
	6-68	1.8-3.8	1.4-2.9	4.5-6.0
Glenelg--------------	0-10	6.0-13	2.6-4.7	5.5-7.3
	10-30	---	3.5-8.4	4.5-6.0
	30-54	10-16	4.3-12	4.5-5.8
	54-76	1.7-8.9	1.2-7.4	4.5-5.5
WhA:				
Wiltshire------------	0-10	6.5-9.9	---	6.1-7.3
	10-29	6.9-12	---	6.1-7.3
	29-43	6.9-11	---	6.1-7.3
	43-98	5.0-11	2.8-6.5	5.1-6.0
WhB:				
Wiltshire------------	0-10	6.5-9.9	---	6.1-7.3
	10-29	6.9-12	---	6.1-7.3
	29-43	6.9-11	---	6.1-7.3
	43-98	5.0-11	2.8-6.5	5.1-6.0
WoA:				
Woodstown------------	0-10	2.0-27	1.0-20	4.0-5.6
	10-22	0.5-8.0	0.6-19	4.3-6.8
	22-35	4.0-15	7.5-19	4.3-6.0
	35-60	1.0-6.0	0.8-8.1	4.3-5.8
WoB:				
Woodstown------------	0-10	2.0-27	1.0-20	4.0-5.6
	10-22	0.5-8.0	0.6-19	4.3-6.8
	22-35	4.0-15	7.5-19	4.3-6.0
	35-60	1.0-6.0	0.8-8.1	4.3-5.8

Table 19.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
ZbA:				
Zekiah---------------	0-3	4.0-30	2.0-15	4.0-5.5
	3-20	2.0-10	1.0-5.0	4.0-5.5
	20-27	5.0-20	2.0-10	4.0-5.5
	27-37	0.0-5.0	0.0-5.0	4.0-5.5
	37-50	0.0-5.0	0.0-5.0	4.0-5.5
	50-80	0.0-5.0	0.0-5.0	4.0-5.5
Issue----------------	0-4	3.0-25	0.5-15	4.0-6.5
	4-19	1.5-11	1.1-11	3.5-6.5
	19-30	0.2-11	0.0-11	3.5-6.5
	30-58	0.2-9.5	0.0-7.7	3.5-6.5
	58-70	3.5-18	1.0-8.4	3.5-6.5

Table 20.--Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
AwB:										
Alloway-------------------	C	High	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
BaA:										
Baile---------------------	D	High	January	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			February	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			March	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			April	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			December	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
BeA:										
Benevola------------------	B	Low	Jan-Dec	---	---	---	---	None	---	None
BeB:										
Benevola------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
BeC:										
Benevola------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
BrC:										
Brinklow------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
BrD:										
Brinklow	B	Medium	Jan-Dec	---	---	---	---	None	---	None
BtF:										
Brinklow	B	High	Jan-Dec	---	---	---	---	None	---	None
Blocktown	C	High	Jan-Dec	---	---	---	---	None	---	None
CeB:										
Chillum	B	Low	Jan-Dec	---	---	---	---	None	---	None
CeC:										
Chillum	B	Low	Jan-Dec	---	---	---	---	None	---	None
ChB:										
Chillum	B	Low	Jan-Dec	---	---	---	---	None	---	None
Russett	C	Low	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
ChC:										
Chillum	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Russett	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
Co:										
Codorus	C	Low	January	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			February	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			March	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			April	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			May	3.3-6.0	>6.0	---	---	None	Brief	Frequent
			June	---	---	---	---	None	Brief	Frequent
			July	---	---	---	---	None	Very brief	Frequent
			August	---	---	---	---	None	Very brief	Frequent
			September	---	---	---	---	None	Very brief	Frequent
			October	---	---	---	---	None	Very brief	Frequent
			November	---	---	---	---	None	Brief	Frequent
			December	3.3-6.0	>6.0	---	---	None	Brief	Frequent
Hatboro	D	Low	January	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			February	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			March	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			April	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			May	0.8-1.7	>6.0	---	---	None	Brief	Frequent
			June	3.3-6.0	>6.0	---	---	None	Very brief	Frequent
			July	3.3-6.0	>6.0	---	---	None	Very brief	Frequent
			August	3.3-6.0	>6.0	---	---	None	Very brief	Frequent
			September	3.3-6.0	>6.0	---	---	None	Very brief	Frequent
			October	3.3-6.0	>6.0	---	---	None	Very brief	Frequent
			November	3.3-6.0	>6.0	---	---	None	Brief	Frequent
			December	1.7-6.0	>6.0	---	---	None	Brief	Frequent
Cp:										
Codorus, frequently flooded	C	Low	January	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			February	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			March	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			April	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	Brief	Frequent

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
Cp:										
Hatboro, frequently flooded------------------	D	Low	January	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			February	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			March	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			April	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			May	0.8-1.7	>6.0	---	---	None	Brief	Frequent
			June	3.3-6.0	>6.0	---	---	None	---	None
			July	3.3-6.0	>6.0	---	---	None	---	None
			August	3.3-6.0	>6.0	---	---	None	---	None
			September	3.3-6.0	>6.0	---	---	None	---	None
			October	3.3-6.0	>6.0	---	---	None	---	None
			November	3.3-6.0	>6.0	---	---	None	Brief	Frequent
			December	1.7-6.0	>6.0	---	---	None	Brief	Frequent
CrD:										
Croom---------------------	C	Medium	Jan-Dec	---	---	---	---	None	---	None
Evesboro------------------	A	Medium	Jan-Dec	---	---	---	---	None	---	None
DhB:										
Downer--------------------	B	Low	Jan-Dec	---	---	---	---	None	---	None
Hammonton-----------------	B	Low	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
DhC:										
Downer--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
DhC:										
Hammonton	B	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
DhD:										
Downer	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Hammonton	B	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
DxC:										
Downer	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Phalanx	B	Medium	Jan-Dec	---	---	---	---	None	---	None
EaB:										
Elioak	C	Low	Jan-Dec	---	---	---	---	None	---	None
EbC:										
Evesboro	A	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
Fa:										
Fallsington, undrained----	D	High	January	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			February	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			March	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			April	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			May	0.8-1.7	>6.0	0.0-0.3	Brief	Occasional	---	None
			June	3.3-6.0	>6.0	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	3.3-6.0	>6.0	0.0-0.3	Brief	Occasional	---	None
			December	1.7-3.3	>6.0	0.0-0.3	Brief	Occasional	---	None
GaC:										
Gaila---------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GaD:										
Gaila---------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GbA:										
Gladstone-----------------	B	Low	Jan-Dec	---	---	---	---	None	---	None
GbB:										
Gladstone-----------------	B	Low	Jan-Dec	---	---	---	---	None	---	None
GbC:										
Gladstone-----------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GcB:										
Gladstone-----------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GcC:										
Gladstone-----------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GdC:										
Gladstone-----------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
GdD:										
Gladstone	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Legore	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GfB:										
Gladstone	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
GfC:										
Gladstone	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
GgA:										
Glenelg	B	Low	Jan-Dec	---	---	---	---	None	---	None
GgB:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GgC:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
GhB:										
Glenelg	B	Low	Jan-Dec	---	---	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
GhC:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
GmA:										
Glenville	C	Low	January	1.7-3.3	2.2-3.8	---	---	None	---	None
			February	1.7-3.3	2.2-3.8	---	---	None	---	None
			March	1.7-3.3	2.2-3.8	---	---	None	---	None
			April	1.7-3.3	2.2-3.8	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.7-3.3	2.2-3.8	---	---	None	---	None
			December	1.7-3.3	2.2-3.8	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
GmB:										
Glenville	C	Medium	January	1.7-3.3	2.2-3.8	---	---	None	---	None
			February	1.7-3.3	2.2-3.8	---	---	None	---	None
			March	1.7-3.3	2.2-3.8	---	---	None	---	None
			April	1.7-3.3	2.2-3.8	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.7-3.3	2.2-3.8	---	---	None	---	None
			December	1.7-3.3	2.2-3.8	---	---	None	---	None
GmC:										
Glenville	C	Medium	January	1.7-3.3	2.2-3.8	---	---	None	---	None
			February	1.7-3.3	2.2-3.8	---	---	None	---	None
			March	1.7-3.3	2.2-3.8	---	---	None	---	None
			April	1.7-3.3	2.2-3.8	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.7-3.3	2.2-3.8	---	---	None	---	None
			December	1.7-3.3	2.2-3.8	---	---	None	---	None
GnB:										
Glenville	C	Medium	January	1.7-3.3	2.2-3.8	---	---	None	---	None
			February	1.7-3.3	2.2-3.8	---	---	None	---	None
			March	1.7-3.3	2.2-3.8	---	---	None	---	None
			April	1.7-3.3	2.2-3.8	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.7-3.3	2.2-3.8	---	---	None	---	None
			December	1.7-3.3	2.2-3.8	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
GnB:										
Baile----------------------	D	High	January	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			February	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			March	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			April	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			December	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
GoB:										
Glenville-----------------	C	Low	January	1.7-3.3	2.2-3.8	---	---	None	---	None
			February	1.7-3.3	2.2-3.8	---	---	None	---	None
			March	1.7-3.3	2.2-3.8	---	---	None	---	None
			April	1.7-3.3	2.2-3.8	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.7-3.3	2.2-3.8	---	---	None	---	None
			December	1.7-3.3	2.2-3.8	---	---	None	---	None
Codorus-------------------	C	Medium	January	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			February	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			March	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			April	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	>6.0	---	---	None	---	None
			December	1.5-2.5	>6.0	---	---	None	Very brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
GuB:										
Glenville	C	Medium	January	1.7-3.3	2.2-3.8	---	---	None	---	None
			February	1.7-3.3	2.2-3.8	---	---	None	---	None
			March	1.7-3.3	2.2-3.8	---	---	None	---	None
			April	1.7-3.3	2.2-3.8	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.7-3.3	2.2-3.8	---	---	None	---	None
			December	1.7-3.3	2.2-3.8	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Udorthents	C	---	January	5.0	>6.0	---	---	None	---	None
			February	5.0	>6.0	---	---	None	---	None
			March	5.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	5.0	>6.0	---	---	None	---	None
			December	5.0	>6.0	---	---	None	---	None
Ha:										
Hatboro	D	Low	January	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional
			February	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional
			March	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional
			April	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional
			May	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	---	None
			November	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional
			December	0.0-0.5	>6.0	0.0-1.0	Brief	Frequent	Very brief	Occasional

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
Ha:										
Codorus-------------------	C	Low	January	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			February	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			March	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			April	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	>6.0	---	---	None	---	None
			December	1.5-2.5	>6.0	---	---	None	Very brief	Occasional
JaB:										
Jackland------------------	D	High	January	1.0-2.0	1.7-3.0	---	---	None	---	None
			February	1.0-2.0	1.7-3.0	---	---	None	---	None
			March	1.0-2.0	1.7-3.0	---	---	None	---	None
			April	1.0-2.0	1.7-3.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	1.0-2.0	1.7-3.0	---	---	None	---	None
LaB:										
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
LaC:										
Legore--------------------	B	Low	Jan-Dec	---	---	---	---	None	---	None
LeB:										
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
LeC:										
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
LmB:										
Legore--------------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Montalto------------------	C	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
LoB:										
Legore	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Montalto	C	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
LoC:										
Legore	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Montalto	C	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
LrD:										
Legore	B	Low	Jan-Dec	---	---	---	---	None	---	None
Relay	B	Medium	Jan-Dec	---	---	---	---	None	---	None
LrF:										
Legore	B	High	Jan-Dec	---	---	---	---	None	---	None
Relay	B	High	Jan-Dec	---	---	---	---	None	---	None
MaB:										
Manor	B	Medium	Jan-Dec	---	---	---	---	None	---	None
MaC:										
Manor	B	Medium	Jan-Dec	---	---	---	---	None	---	None
MaD:										
Manor	B	High	Jan-Dec	---	---	---	---	None	---	None
McD:										
Manor	B	High	Jan-Dec	---	---	---	---	None	---	None
MgD:										
Manor	B	High	Jan-Dec	---	---	---	---	None	---	None
Bannertown	B	High	Jan-Dec	---	---	---	---	None	---	None
MgF:										
Manor	B	High	Jan-Dec	---	---	---	---	None	---	None
Bannertown	B	High	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
MkF:										
Manor	B	High	Jan-Dec	---	---	---	---	None	---	None
Brinklow	B	High	Jan-Dec	---	---	---	---	None	---	None
MoB:										
Mount Lucas	C	High	January	0.5-3.0	4.0-6.0	---	---	None	---	None
			February	0.5-3.0	4.0-6.0	---	---	None	---	None
			March	0.5-3.0	4.0-6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	0.5-3.0	4.0-6.0	---	---	None	---	None
			December	0.5-3.0	4.0-6.0	---	---	None	---	None
MoC:										
Mount Lucas	C	High	January	0.5-3.0	4.0-6.0	---	---	None	---	None
			February	0.5-3.0	4.0-6.0	---	---	None	---	None
			March	0.5-3.0	4.0-6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	0.5-3.0	4.0-6.0	---	---	None	---	None
			December	0.5-3.0	4.0-6.0	---	---	None	---	None
OcB:										
Occoquan	B	Medium	Jan-Dec	---	---	---	---	None	---	None
OcC:										
Occoquan	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
PfC:										
Patapsco------------------	A	Low	January	3.3-6.0	>6.0	---	---	None	---	None
			February	3.3-6.0	>6.0	---	---	None	---	None
			March	3.3-6.0	>6.0	---	---	None	---	None
			April	3.3-6.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
Fort Mott-----------------	A	Low	Jan-Dec	---	---	---	---	None	---	None
RsB:										
Russett-------------------	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
RsC:										
Russett-------------------	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RsD:										
Russett-------------------	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
RtB:										
Russett-------------------	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
Alloway-------------------	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RtB:										
Hambrook------------------	B	Very low	January	3.3-6.0	>6.0	---	---	None	---	None
			February	3.3-6.0	>6.0	---	---	None	---	None
			March	3.3-6.0	>6.0	---	---	None	---	None
			April	4.0-6.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
RtC:										
Russett-------------------	C	High	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
Alloway-------------------	C	High	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RtB:										
Hambrook------------------	B	Medium	January	3.3-6.0	>6.0	---	---	None	---	None
			February	3.3-6.0	>6.0	---	---	None	---	None
			March	3.3-6.0	>6.0	---	---	None	---	None
			April	4.0-6.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
RtD:										
Russett-------------------	C	High	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
Alloway-------------------	C	High	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RtB:										
Hambrook------------------	B	Medium	January	3.3-6.0	>6.0	---	---	None	---	None
			February	3.3-6.0	>6.0	---	---	None	---	None
			March	3.3-6.0	>6.0	---	---	None	---	None
			April	4.0-6.0	>6.0	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	---	---	---	---	None	---	None
RuB:										
Russett-------------------	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
Beltsville----------------	C	Low	January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
RuC:										
Russett	C	Medium	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
Beltsville	C	Medium	January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None
SaB:										
Sassafras	B	Low	Jan-Dec	---	---	---	---	None	---	None
SaC:										
Sassafras	B	Medium	Jan-Dec	---	---	---	---	None	---	None
SfB:										
Sassafras	B	Low	Jan-Dec	---	---	---	---	None	---	None
SrC:										
Sassafras	B	Low	Jan-Dec	---	---	---	---	None	---	None
Croom	C	Medium	Jan-Dec	---	---	---	---	None	---	None
SrD:										
Sassafras	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Croom	C	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
SrE:										
Sassafras	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Croom	B	High	Jan-Dec	---	---	---	---	None	---	None
UaF:										
Udorthents	---	---	Jan-Dec	---	---	---	---	---	---	---
UbF:										
Udorthents	---	---	Jan-Dec	---	---	---	---	---	---	---
UcB:										
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Chillum	B	Low	Jan-Dec	---	---	---	---	None	---	None
Beltsville	C	Low	January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None
UcD:										
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Chillum	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Beltsville	C	Medium	January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UdB:										
Udorthents----------------	C	Medium	January	5.0	>6.0	---	---	None	---	None
			February	5.0	>6.0	---	---	None	---	None
			March	5.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	5.0	>6.0	---	---	None	---	None
			December	5.0	>6.0	---	---	None	---	None
UfA:										
Urban land----------------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Fallsington, undrained----	D	High	January	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			February	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			March	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			April	0.0-0.8	>6.0	0.0-0.3	Brief	Occasional	---	None
			May	0.8-1.7	>6.0	0.0-0.3	Brief	Occasional	---	None
			June	3.3-6.0	>6.0	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	3.3-6.0	>6.0	0.0-0.3	Brief	Occasional	---	None
			December	1.7-3.3	>6.0	0.0-0.3	Brief	Occasional	---	None
UoE:										
Udorthents----------------	---	---	Jan-Dec	---	---	---	---	---	---	---
Ur:										
Urban land----------------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
UsB:										
Urban land----------------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Sassafras-----------------	B	Low	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UsB:										
Beltsville	C	Low	January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None
UsD:										
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Sassafras	B	Low	Jan-Dec	---	---	---	---	None	---	None
Beltsville	C	---	January	1.5-2.5	2.0-3.0	---	---	None	---	None
			February	1.5-2.5	2.0-3.0	---	---	None	---	None
			March	1.5-2.5	2.0-3.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-2.5	2.0-3.0	---	---	None	---	None
			December	1.5-2.5	2.0-3.0	---	---	None	---	None
UtD:										
Urban land	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Udorthents	C	High	January	5.0	>6.0	---	---	None	---	None
			February	5.0	>6.0	---	---	None	---	None
			March	5.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	5.0	>6.0	---	---	None	---	None
			December	5.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UuB:										
Urban land----------------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Udorthents----------------	C	High	January	5.0	>6.0	---	---	None	---	None
			February	5.0	>6.0	---	---	None	---	None
			March	5.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	5.0	>6.0	---	---	None	---	None
			December	5.0	>6.0	---	---	None	---	None
UuD:										
Urban land----------------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Udorthents----------------	C	Very high	January	5.0	>6.0	---	---	None	---	None
			February	5.0	>6.0	---	---	None	---	None
			March	5.0	>6.0	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	5.0	>6.0	---	---	None	---	None
			December	5.0	>6.0	---	---	None	---	None
UwC:										
Urban land----------------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Woodstown-----------------	C	Very low	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
UwC:										
Sassafras	B	Low	Jan-Dec	---	---	---	---	None	---	None
WaA:										
Watchung	D	High	January	0.0-1.0	>6.0	---	---	None	---	None
			February	0.0-1.0	>6.0	---	---	None	---	None
			March	0.0-1.0	>6.0	---	---	None	---	None
			April	0.0-1.0	>6.0	---	---	None	---	None
			May	0.0-1.0	>6.0	---	---	None	---	None
			June	0.0-1.0	>6.0	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	0.0-1.0	>6.0	---	---	None	---	None
WcB:										
Watchung	D	Very high	January	0.0-1.0	>6.0	---	---	None	---	None
			February	0.0-1.0	>6.0	---	---	None	---	None
			March	0.0-1.0	>6.0	---	---	None	---	None
			April	0.0-1.0	>6.0	---	---	None	---	None
			May	0.0-1.0	>6.0	---	---	None	---	None
			June	0.0-1.0	>6.0	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	0.0-1.0	>6.0	---	---	None	---	None
WgB:										
Wheaton	B	Low	Jan-Dec	---	---	---	---	None	---	None
Glenelg	B	Low	Jan-Dec	---	---	---	---	None	---	None
WgD:										
Wheaton	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
WhA:										
Wiltshire----------------	C	Low	January	1.5-3.0	2.3-3.5	---	---	None	---	None
			February	1.5-3.0	2.3-3.5	---	---	None	---	None
			March	1.5-3.0	2.3-3.5	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-3.0	2.3-3.5	---	---	None	---	None
			December	1.5-3.0	2.3-3.5	---	---	None	---	None
WhB:										
Wiltshire----------------	C	Medium	January	1.5-3.0	2.3-3.5	---	---	None	---	None
			February	1.5-3.0	2.3-3.5	---	---	None	---	None
			March	1.5-3.0	2.3-3.5	---	---	None	---	None
			April	---	---	---	---	None	---	None
			May	---	---	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	1.5-3.0	2.3-3.5	---	---	None	---	None
			December	1.5-3.0	2.3-3.5	---	---	None	---	None
WoA:										
Woodstown----------------	C	Negligible	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None

Table 20.--Water Features--Continued

Map symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
WoB:										
Woodstown-----------------	C	Low	January	1.7-3.3	>6.0	---	---	None	---	None
			February	1.7-3.3	>6.0	---	---	None	---	None
			March	1.7-3.3	>6.0	---	---	None	---	None
			April	1.7-3.3	>6.0	---	---	None	---	None
			May	3.3-6.0	>6.0	---	---	None	---	None
			June	---	---	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	---	---	---	---	None	---	None
			November	---	---	---	---	None	---	None
			December	3.3-6.0	>6.0	---	---	None	---	None
ZbA:										
Zekiah--------------------	D	Negligible	January	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			February	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			March	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			April	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			May	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			June	0.0-0.8	>6.0	---	---	None	---	None
			July	0.0-0.8	>6.0	---	---	None	---	None
			August	0.0-0.8	>6.0	---	---	None	---	None
			September	0.0-0.8	>6.0	---	---	None	---	None
			October	0.0-0.8	>6.0	---	---	None	---	None
			November	0.0-0.8	>6.0	---	---	None	Brief	Frequent
			December	0.0-0.8	>6.0	---	---	None	Brief	Frequent
Issue---------------------	C	Low	January	0.8-1.7	>6.0	---	---	None	Brief	Frequent
			February	0.8-1.7	>6.0	---	---	None	Brief	Frequent
			March	0.8-1.7	>6.0	---	---	None	Brief	Frequent
			April	0.8-1.7	>6.0	---	---	None	Brief	Frequent
			May	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			June	3.3-6.0	>6.0	---	---	None	---	None
			July	---	---	---	---	None	---	None
			August	---	---	---	---	None	---	None
			September	---	---	---	---	None	---	None
			October	3.3-6.0	>6.0	---	---	None	---	None
			November	1.7-3.3	>6.0	---	---	None	Brief	Frequent
			December	0.8-1.7	>6.0	---	---	None	Brief	Frequent

Table 21.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In				
AwB:							
Alloway	---	---	---	---	High	High	Moderate
BaA:							
Baile	---	---	---	---	High	High	High
BeA:							
Benevola	---	---	---	---	Moderate	Moderate	Low
BeB:							
Benevola	---	---	---	---	Moderate	Moderate	Low
BeC:							
Benevola	---	---	---	---	Moderate	Moderate	Low
BrC:							
Brinklow	Paralithic bedrock	25-35	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	35-39	---	Very strongly cemented			
BrD:							
Brinklow	Paralithic bedrock	25-35	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	35-39	---	Very strongly cemented			
BtF:							
Brinklow	Paralithic bedrock	25-35	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	35-39	---	Very strongly cemented			
Blocktown	Paralithic bedrock	10-21	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	17-25	---	Very strongly cemented			
CeB:							
Chillum	---	---	---	---	High	Moderate	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
CeC:							
Chillum----------------	---	---	---	---	High	Moderate	High
ChB:							
Chillum----------------	---	---	---	---	High	Moderate	High
Russett----------------	---	---	---	---	High	Moderate	High
ChC:							
Chillum----------------	---	---	---	---	High	Moderate	High
Russett----------------	---	---	---	---	High	Moderate	High
Co:							
Codorus----------------	---	---	---	---	High	High	Moderate
Hatboro----------------	---	---	---	---	High	High	Moderate
Cp:							
Codorus, frequently flooded---------------	---	---	---	---	High	High	Moderate
Hatboro, frequently flooded---------------	---	---	---	---	High	High	Moderate
CrD:							
Croom------------------	---	---	---	---	Moderate	Low	High
Evesboro---------------	---	---	---	---	Low	Low	High
DhB:							
Downer-----------------	---	---	---	---	Moderate	Moderate	High
Hammonton--------------	---	---	---	---	Moderate	Moderate	High
DhC:							
Downer-----------------	---	---	---	---	Moderate	Moderate	High
Hammonton--------------	---	---	---	---	Moderate	Moderate	High
DhD:							
Downer-----------------	---	---	---	---	Moderate	Moderate	High
Hammonton--------------	---	---	---	---	Moderate	Moderate	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
DxC:							
Downer	---	---	---	---	Moderate	Moderate	High
Phalanx	Undefined	12-30	4-17	Strongly cemented	Low	Low	Moderate
EaB:							
Elioak	---	---	---	---	Moderate	High	Moderate
EbC:							
Evesboro	---	---	---	---	Low	Low	High
Fa:							
Fallsington, undrained	---	---	---	---	Moderate	High	High
GaC:							
Gaila	---	---	---	---	Moderate	Moderate	High
GaD:							
Gaila	---	---	---	---	Moderate	Moderate	High
GbA:							
Gladstone	---	---	---	---	Moderate	Moderate	High
GbB:							
Gladstone	---	---	---	---	Moderate	Moderate	High
GbC:							
Gladstone	---	---	---	---	Moderate	Moderate	High
GcB:							
Gladstone	---	---	---	---	Moderate	Moderate	High
Legore	---	---	---	---	Moderate	Moderate	Moderate
GcC:							
Gladstone	---	---	---	---	Moderate	Moderate	High
Legore	---	---	---	---	Moderate	Moderate	Moderate
GdC:							
Gladstone	---	---	---	---	Moderate	Moderate	High
Legore	---	---	---	---	Moderate	Moderate	Moderate
GdD:							
Gladstone	---	---	---	---	Moderate	Moderate	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top (In)	Restrictive layer: Thickness (In)	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
GdD:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
GfB:							
Gladstone	Lithic bedrock	72-100	---	Very strongly cemented	Moderate	Moderate	High
Urban land	---	---	---	---	---	---	---
GfC:							
Gladstone	---	---	---	---	Moderate	Moderate	High
Urban land	---	---	---	---	---	---	---
GgA:							
Glenelg	---	---	---	---	Moderate	Moderate	High
GgB:							
Glenelg	---	---	---	---	Moderate	Moderate	High
GgC:							
Glenelg	---	---	---	---	Moderate	Moderate	High
GhB:							
Glenelg	---	---	---	---	Moderate	Moderate	High
Urban land	---	---	---	---	---	---	---
GhC:							
Glenelg	---	---	---	---	Moderate	Moderate	High
Urban land	---	---	---	---	---	---	---
GmA:							
Glenville	Fragipan	24-39	---	Extremely weakly cemented	High	High	Moderate
GmB:							
Glenville	Fragipan	24-39	---	Extremely weakly cemented	High	High	Moderate
GmC:							
Glenville	Fragipan	24-39	---	Extremely weakly cemented	High	High	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In				
GnB:							
Glenville	Fragipan	24-39	---	Extremely weakly cemented	High	High	Moderate
Baile	---	---	---	---	High	High	High
GoB:							
Glenville	Fragipan	24-39	---	Extremely weakly cemented	High	High	Moderate
Codorus	---	---	---	---	High	High	Moderate
GuB:							
Glenville	Fragipan	24-39	---	Extremely weakly cemented	High	High	Moderate
Urban land	---	---	---	---	---	---	---
Udorthents	Paralithic bedrock	40-40	---	Moderately cemented	Moderate	Moderate	Moderate
Ha:							
Hatboro	---	---	---	---	High	High	Moderate
Codorus	---	---	---	---	High	High	Moderate
JaB:							
Jackland	---	---	---	---	High	High	High
LaB:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
LaC:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
LeB:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
LeC:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
LmB:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
Montalto	---	---	---	---	Moderate	Moderate	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
LoB:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
Montalto	---	---	---	---	Moderate	Moderate	Moderate
Urban land	---	---	---	---	None	---	---
LoC:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
Montalto	---	---	---	---	Moderate	Moderate	Moderate
Urban land	---	---	---	---	None	---	---
LrD:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
Relay	Lithic bedrock	62-80	---	Very strongly cemented	Moderate	Low	Moderate
LrF:							
Legore	---	---	---	---	Moderate	Moderate	Moderate
Relay	Lithic bedrock	62-80	---	Very strongly cemented	Moderate	Low	Moderate
MaB:							
Manor	---	---	---	---	Moderate	Moderate	Moderate
MaC:							
Manor	---	---	---	---	Moderate	Moderate	Moderate
MaD:							
Manor	---	---	---	---	Moderate	Moderate	Moderate
McD:							
Manor	---	---	---	---	Moderate	Moderate	Moderate
MgD:							
Manor	---	---	---	---	Moderate	Moderate	Moderate
Bannertown	Paralithic bedrock	24-40	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	30-40	---	Indurated			
MgF:							
Manor	---	---	---	---	Moderate	Moderate	Moderate

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
MgF:							
Bannertown	Paralithic bedrock	24-40	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	30-40	---	Indurated			
MkF:							
Manor	---	---	---	---	Moderate	Moderate	Moderate
Brinklow	Paralithic bedrock	20-35	---	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	35-39	---	Very strongly cemented			
MoB:							
Mount Lucas	Lithic bedrock	60-99	---	Indurated	High	Moderate	Moderate
MoC:							
Mount Lucas	Lithic bedrock	60-99	---	Indurated	High	Moderate	Moderate
OcB:							
Occoquan	Paralithic bedrock	40-60	---	Moderately cemented	Moderate	Moderate	High
OcC:							
Occoquan	Paralithic bedrock	40-60	---	Moderately cemented	Moderate	Moderate	High
PfC:							
Patapsco	Abrupt textural change	---	---	---	Moderate	Moderate	Moderate
Fort Mott	---	---	---	---	Moderate	Moderate	Moderate
RsB:							
Russett	---	---	---	---	High	Moderate	High
RsC:							
Russett	---	---	---	---	High	Moderate	High
RsD:							
Russett	---	---	---	---	High	Moderate	High
RtB:							
Russett	---	---	---	---	High	Moderate	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In				
RtB:							
Alloway	---	---	---	---	High	High	Moderate
Hambrook	---	---	---	---	Moderate	Moderate	High
RtC:							
Russett	---	---	---	---	High	Moderate	High
Alloway	---	---	---	---	High	High	Moderate
Hambrook	---	---	---	---	Moderate	Moderate	High
RtD:							
Russett	---	---	---	---	High	Moderate	High
Alloway	---	---	---	---	High	High	Moderate
Hambrook	---	---	---	---	Moderate	Moderate	High
RuB:							
Russett	---	---	---	---	High	Moderate	High
Beltsville	Fragipan	12-34	---	Moderately cemented	High	High	High
RuC:							
Russett	---	---	---	---	High	Moderate	High
Beltsville	Fragipan	12-34	---	Moderately cemented	High	High	High
SaB:							
Sassafras	---	---	---	---	Moderate	Moderate	High
SaC:							
Sassafras	---	---	---	---	Moderate	Moderate	High
SfB:							
Sassafras	---	---	---	---	Moderate	Moderate	High
SrC:							
Sassafras	---	---	---	---	Moderate	Moderate	High
Croom	---	---	---	---	Moderate	Low	High
SrD:							
Sassafras	---	---	---	---	Moderate	Moderate	High
Croom	---	---	---	---	Moderate	Low	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In				
SrE:							
Sassafras	---	---	---	---	Moderate	Moderate	High
Croom	---	---	---	---	Moderate	Moderate	High
UaF:							
Udorthents	---	---	---	---	---	---	---
UbF:							
Udorthents	---	---	---	---	---	---	---
UcB:							
Urban land	---	---	---	---	None	---	---
Chillum	---	---	---	---	High	Moderate	High
Beltsville	Fragipan	12-34	---	Moderately cemented	High	High	High
UcD:							
Urban land	---	---	---	---	None	---	---
Chillum	---	---	---	---	High	Moderate	High
Beltsville	Fragipan	12-34	---	Moderately cemented	High	High	High
UdB:							
Udorthents	---	---	---	---	Moderate	Moderate	Moderate
UfA:							
Urban land	---	---	---	---	None	---	---
Fallsington, undrained	---	---	---	---	Moderate	High	High
UoE:							
Udorthents	---	---	---	---	---	---	---
Ur:							
Urban land	---	---	---	---	None	---	---
UsB:							
Urban land	---	---	---	---	None	---	---
Sassafras	---	---	---	---	Moderate	Moderate	High
Beltsville	Fragipan	12-34	---	Moderately cemented	High	High	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Thickness	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In	In				
UsD:							
Urban land	---	---	---	---	None	---	---
Sassafras	---	---	---	---	Moderate	Moderate	High
Beltsville	Fragipan	12-34	---	Moderately cemented	High	High	High
UtD:							
Urban land	---	---	---	---	None	---	---
Udorthents	---	---	---	---	Moderate	Moderate	Moderate
UuB:							
Urban land	---	---	---	---	None	---	---
Udorthents	Paralithic bedrock	40-60	---	Moderately cemented	Moderate	Moderate	Moderate
UuD:							
Urban land	---	---	---	---	None	---	---
Udorthents	Paralithic bedrock	40-60	---	Moderately cemented	Moderate	Moderate	Moderate
UwC:							
Urban land	---	---	---	---	None	---	---
Woodstown	---	---	---	---	Moderate	Moderate	High
Sassafras	---	---	---	---	Moderate	Moderate	High
WaA:							
Watchung	---	---	---	---	High	High	Low
WcB:							
Watchung	---	---	---	---	High	High	Low
WgB:							
Wheaton	---	---	---	---	Moderate	Moderate	High
Glenelg	---	---	---	---	Moderate	Moderate	High
WgD:							
Wheaton	---	---	---	---	Moderate	Moderate	High
Glenelg	---	---	---	---	Moderate	Moderate	High

Table 21.--Soil Features--Continued

Map symbol and soil name	Restrictive layer				Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated steel	Concrete
		In	In				
WhA:							
Wiltshire	Fragipan	24-43	---	Extremely weakly cemented	High	Moderate	Low
WhB:							
Wiltshire	Fragipan	24-43	---	Extremely weakly cemented	High	High	Low
WoA:							
Woodstown	---	---	---	---	High	Moderate	High
WoB:							
Woodstown	---	---	---	---	Moderate	Moderate	High
ZbA:							
Zekiah	---	---	---	---	Moderate	Moderate	High
Issue	---	---	---	---	None	Moderate	High

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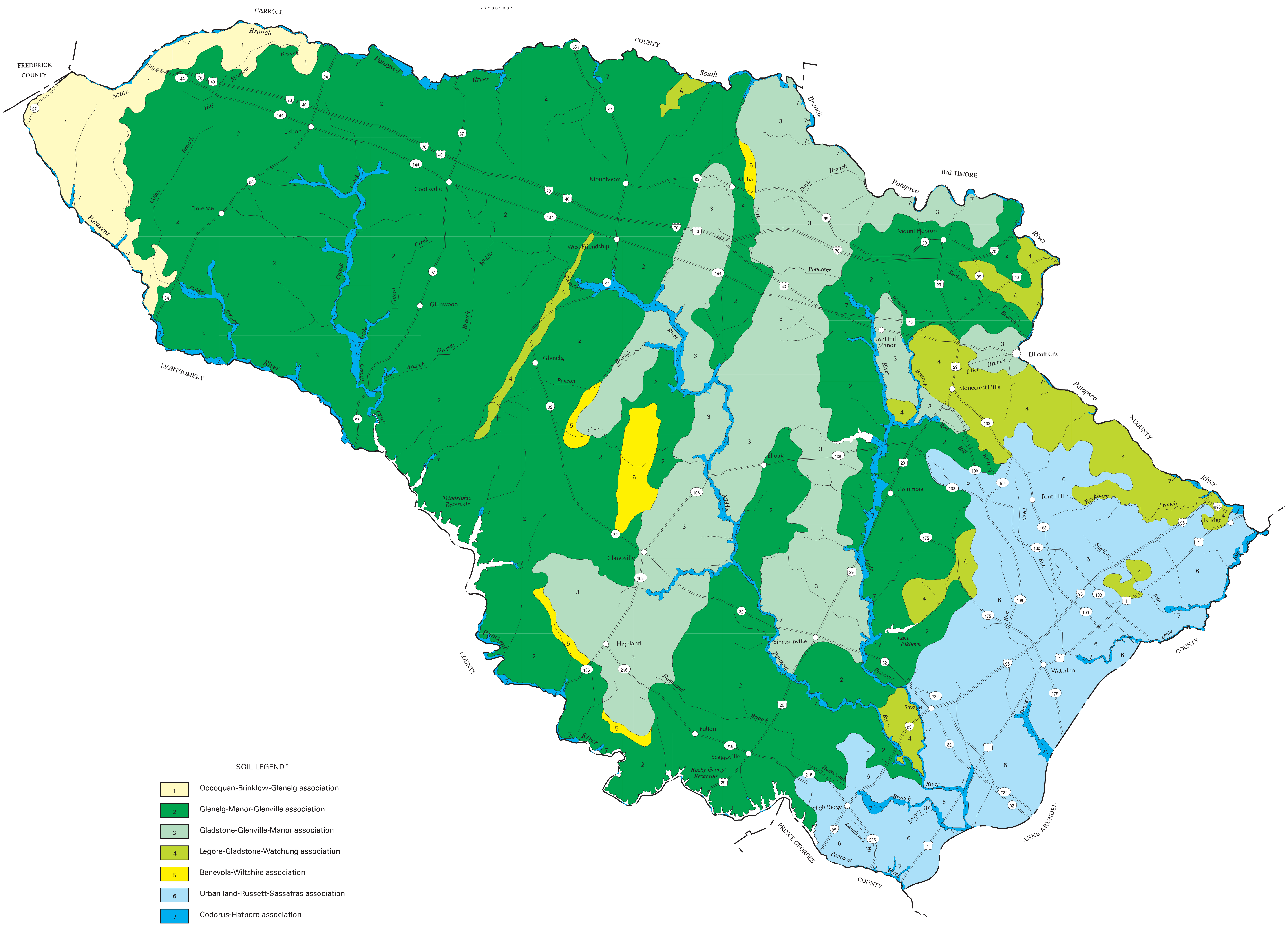


SOIL LEGEND*

1	Occoquan-Brinklow-Glenelg association
2	Glenelg-Manor-Glenville association
3	Gladstone-Glenville-Manor association
4	Legore-Gladstone-Watchung association
5	Benevola-Wiltshire association
6	Urban land-Russett-Sassafras association
7	Codorus-Hatboro association

*The units on this legend are descibed in the text under the heading "General Soil Map Units."

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
MARYLAND AGRICULTURAL EXPERIMENT STATION
(UNIVERSITY OF MARYLAND)
MARYLAND DEPARTMENT OF AGRICULTURE
HOWARD COUNTY BOARD OF COMMISSIONERS
HOWARD COUNTY SOIL CONSERVATION DISTRICT

GENERAL SOIL MAP
HOWARD COUNTY, MARYLAND

N

MILES 1 0 1 2 3

KILOMETERS 1 0 1 2 3 4 5 6

SCALE = 1:75000

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

INDEX TO MAP SHEETS
HOWARD COUNTY, MARYLAND

MILES

KILOMETERS

SCALE = 1:75000

SOIL LEGEND

SYMBOL	NAME
AwB	Alloway silt loam, 2 to 5 percent slopes
BaA	Baile silt loam, 0 to 3 percent slopes
BeA	Benevola silt loam, 0 to 3 percent slopes
BeB	Benevola silt loam, 3 to 8 percent slopes
BeC	Benevola silt loam, 8 to 15 percent slopes
BrC	Brinklow channery loam, 8 to 15 percent slopes
BrD	Brinklow channery loam, 15 to 25 percent slopes
BtF	Brinklow-Blocktown channery loams, 25 to 65 percent slopes
CeB	Chillum loam, 2 to 5 percent slopes
CeC	Chillum loam, 5 to 10 percent slopes
ChB	Chillum-Russett loams, 2 to 5 percent slopes
ChC	Chillum-Russett loams, 5 to 10 percent slopes
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes
Cp	Codorus and Hatboro soils, 0 to 2 percent slopes, frequently flooded
CrD	Croom and Evesboro soils, 10 to 15 percent slopes
DhB	Downer-Hammonton sandy loams, 2 to 5 percent slopes
DhC	Downer-Hammonton sandy loams, 5 to 10 percent slopes
DhD	Downer-Hammonton sandy loams, 10 to 15 percent slopes
DxC	Downer-Phalanx complex, 5 to 10 percent slopes
EaB	Elioak silt loam, 3 to 8 percent slopes
EbC	Evesboro loamy sand, 2 to 10 percent slopes
Fa	Fallsington sandy loam, 0 to 2 percent slopes
GaC	Gaila loam, 8 to 15 percent slopes
GaD	Gaila loam, 15 to 25 percent slopes
GbA	Gladstone loam, 0 to 3 percent slopes
GbB	Gladstone loam, 3 to 8 percent slopes
GbC	Gladstone loam, 8 to 15 percent slopes
GcB	Gladstone-Legore complex, 3 to 8 percent slopes
GcC	Gladstone-Legore complex, 8 to 15 percent slopes
GdC	Gladstone-Legore complex, 8 to 15 percent slopes, stony
GdD	Gladstone-Legore complex, 15 to 25 percent slopes, stony
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes
GgA	Glenelg loam, 0 to 3 percent slopes
GgB	Glenelg loam, 3 to 8 percent slopes
GgC	Glenelg loam, 8 to 15 percent slopes
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes
GhC	Glenelg-Urban land complex, 8 to 15 percent slopes
GmA	Glenville silt loam, 0 to 3 percent slopes
GmB	Glenville silt loam, 3 to 8 percent slopes
GmC	Glenville silt loam, 8 to 15 percent slopes
GnB	Glenville-Baile silt loams, 0 to 8 percent slopes
GoB	Glenville-Codorus silt loams, 0 to 8 percent slopes
GuB	Glenville-Urban land-Udorthents complex, 0 to 8 percent slopes
Ha	Hatboro-Codorus silt loams, 0 to 3 percent slopes
JaB	Jackland silt loam, 3 to 8 percent slopes
LaB	Legore silt loam, 3 to 8 percent slopes
LaC	Legore silt loam, 8 to 15 percent slopes
LeB	Legore silt loam, 3 to 8 percent slopes, stony
LeC	Legore silt loam, 8 to 15 percent slopes, stony
LmB	Legore-Montalto silt loams, 3 to 8 percent slopes
LoB	Legore-Montalto-Urban land complex, 0 to 8 percent slopes
LoC	Legore-Montalto-Urban land complex, 8 to 15 percent slopes
LrD	Legore-Relay gravelly loams, 15 to 25 percent slopes, very stony
LrF	Legore-Relay gravelly loams, 25 to 65 percent slopes, very stony
MaB	Manor loam, 3 to 8 percent slopes
MaC	Manor loam, 8 to 15 percent slopes
MaD	Manor loam, 15 to 25 percent slopes
McD	Manor loam, 15 to 25 percent slopes, very rocky
MgD	Manor-Bannertown sandy loams, 15 to 25 percent slopes, rocky
MgF	Manor-Bannertown sandy loams, 25 to 65 percent slopes, rocky
MkF	Manor-Brinklow complex, 25 to 65 percent slopes, very rocky
MoB	Mount Lucas silt loam, 3 to 8 percent slopes, stony
MoC	Mount Lucas silt loam, 8 to 15 percent slopes, stony
OcB	Occoquan loam, 3 to 8 percent slopes
OcC	Occoquan loam, 8 to 15 percent slopes
PfC	Patapsco-Fort Mott complex, 5 to 10 percent slopes
RsB	Russett fine sandy loam, 2 to 5 percent slopes
RsC	Russett fine sandy loam, 5 to 10 percent slopes
RsD	Russett fine sandy loam, 10 to 15 percent slopes
RtB	Russett-Alloway-Hambrook complex, 0 to 5 percent slopes
RtC	Russett-Alloway-Hambrook complex, 5 to 10 percent slopes
RtD	Russett-Alloway-Hambrook complex, 10 to 15 percent slopes
RuB	Russett and Beltsville soils, 2 to 5 percent slopes
RuC	Russett and Beltsville soils, 5 to 10 percent slopes
SaB	Sassafras loam, 2 to 5 percent slopes
SaC	Sassafras loam, 5 to 10 percent slopes
SfB	Sassafras gravelly sandy loam, 2 to 5 percent slopes
SrC	Sassafras and Croom soils, 5 to 10 percent slopes
SrD	Sassafras and Croom soils, 10 to 15 percent slopes
SrE	Sassafras and Croom soils, 15 to 25 percent slopes
UaF	Udorthents, Highway, 0 to 65 percent slopes
UbF	Udorthents, Refuse, 0 to 65 percent slopes
UcB	Urban land-Chillum-Beltsville complex, 0 to 5 percent slopes
UcD	Urban land-Chillum-Beltsville complex, 5 to 15 percent slopes
UdB	Udorthents, loamy, 0 to 5 percent slopes
UfA	Urban land-Fallsington complex, 0 to 2 percent slopes
UoE	Udorthents, 0 to 45 percent slopes, Gravel Pits
Ur	Urban land
UsB	Urban land-Sassafras-Beltsville complex, 0 to 5 percent slopes
UsD	Urban land-Sassafras-Beltsville complex, 5 to 15 percent slopes
UtD	Urban land-Udorthents complex, 0 to 15 percent slopes
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes
UuD	Urban land-Udorthents complex, 8 to 25 percent slopes
UwC	Urban land-Woodstown-Sassafras complex, 5 to 10 percent slopes
W	Water
WaA	Watchung silt loam, 0 to 3 percent slopes
WcB	Watchung silt loam, 3 to 8 percent slopes, stony
WgB	Wheaton-Glenelg complex, 0 to 8 percent slopes
WgD	Wheaton-Glenelg complex, 8 to 25 percent slopes
WhA	Wiltshire silt loam, 0 to 3 percent slopes
WhB	Wiltshire silt loam, 3 to 8 percent slopes
WoA	Woodstown sandy loam, 0 to 2 percent slopes
WoB	Woodstown sandy loam, 2 to 5 percent slopes
ZbA	Zekiah and Issue soils, 0 to 2 percent slopes, frequently flooded

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access area
- Field sheet matchline and neatline
- Previously published survey

OTHER BOUNDARY

- Airport, airfield
- Cemetery
- City/county park

STATE COORDINATE TICK
1 890 000 FEET

LAND DIVISION CORNER
(section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

- Divided roads
- Other roads
- Trail

ROAD EMBLEMS AND DESIGNATIONS

- Interstate 173 79 345
- Federal 287 410 224
- State 52 52 347
- County, farm or ranch 1283

RAILROAD

POWER TRANSMISSION LINE

PIPELINE

FENCE

LEVEES

- Without road
- With road
- With railroad
- Single side slope

DAMS

- Medium or small W

LANDFORM FEATURES

- Prominent hill or peak
- Soil sample site

CULTURAL FEATURES

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house
- Church
- School
- Other religion Mt Carmel
- Located object Ranger Station
- Tank Petroleum
- Lookout tower
- Oil and/or natural gas wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS

- Perennial stream, double line
- Perennial stream, single line
- Intermittent stream
- Drainage end

DRAINAGE AND IRRIGATION

- Double-line canal CANAL
- Perennial drainage and/or irrigation ditch
- Intermittent drainage and/or irrigation ditch

SMALL LAKES, PONDS, AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line FLOOD POOL LINE

MISCELLANEOUS WATER FEATURES

- Spring
- Well, artesian
- Well, irrigation

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS 3520 4200

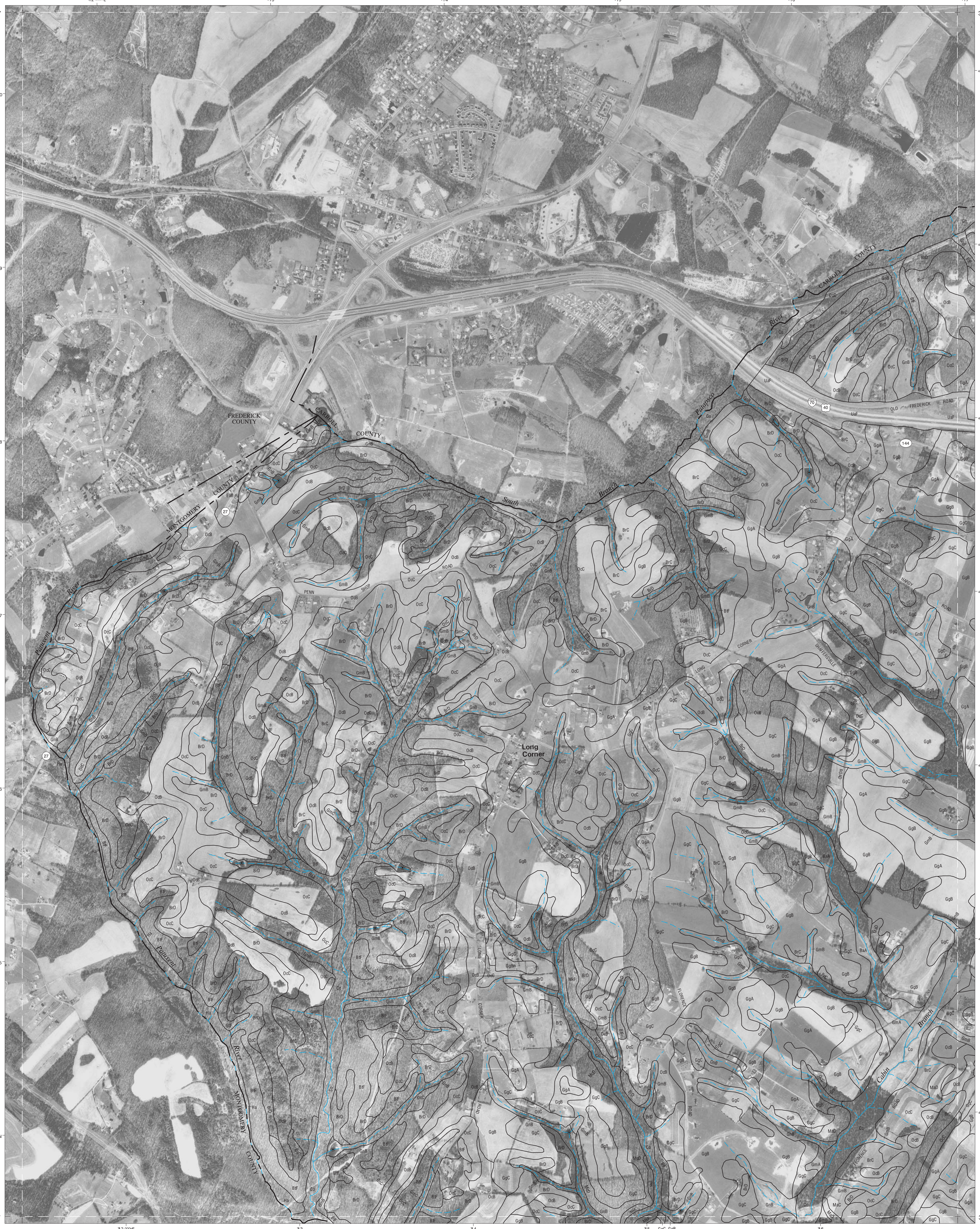
LANDFORM FEATURES

- Bedrock escarpment
- Other than bedrock escarpment
- Short steep slope
- Gully
- Depression, closed
- Sinkhole
- Borrow pit
- Gravel pit
- Mine or quarry
- Landfill

MISCELLANEOUS SURFACE FEATURES

- Blowout
- Clay spot
- Gravelly spot
- Lava spot
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sodic spot
- Spoil area
- Stony spot
- Very stony spot
- Wet spot

77°11′15″ 77°07′30″
39°22′30″ 39°22′30″



39°18′45″ 39°18′45″
77°11′15″ 77°07′30″

Joins sheet 9, Woodbine SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

		2
	8	9

2 WOODBINE NW
8 DAMASCUS SE
9 WOODBINE SW

INDEX TO ADJOINING 3.75 MAPS

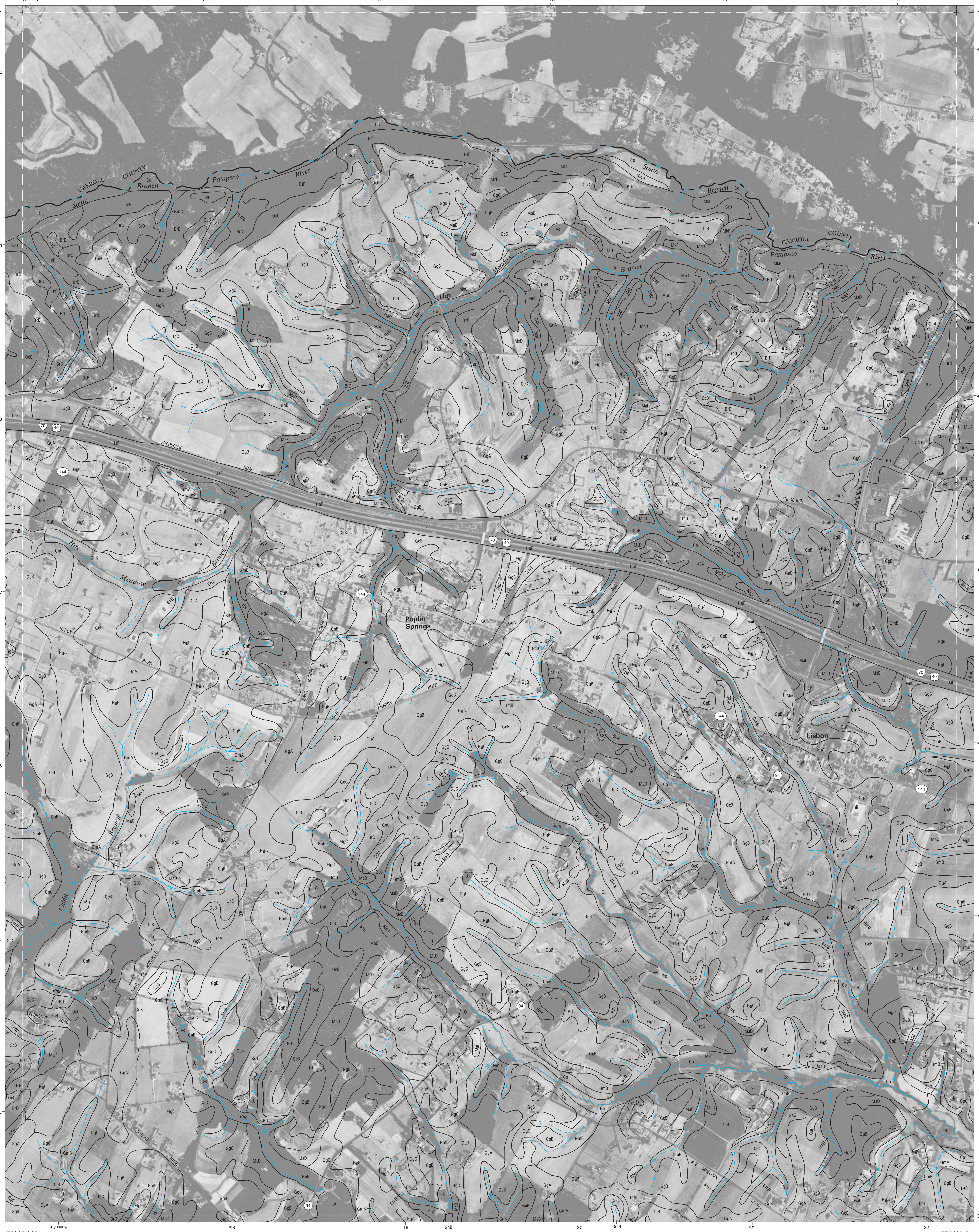
DAMASCUS NE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 1 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
WOODBINE NW QUADRANGLE
SHEET NUMBER 2 OF 29



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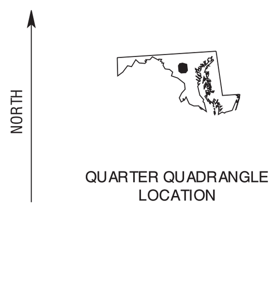
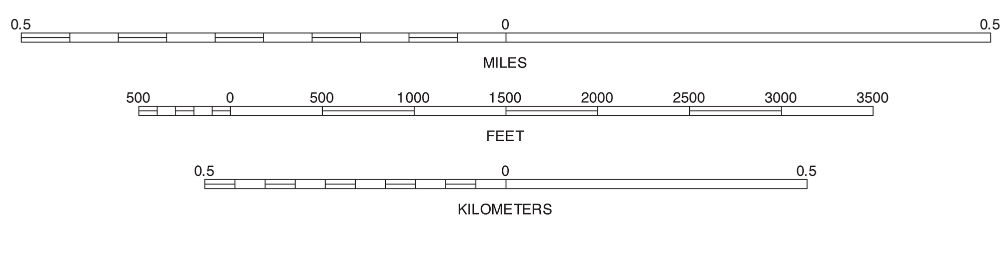
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUARTER QUADRANGLE LOCATION

SCALE 1:12000



1		3
8	9	10

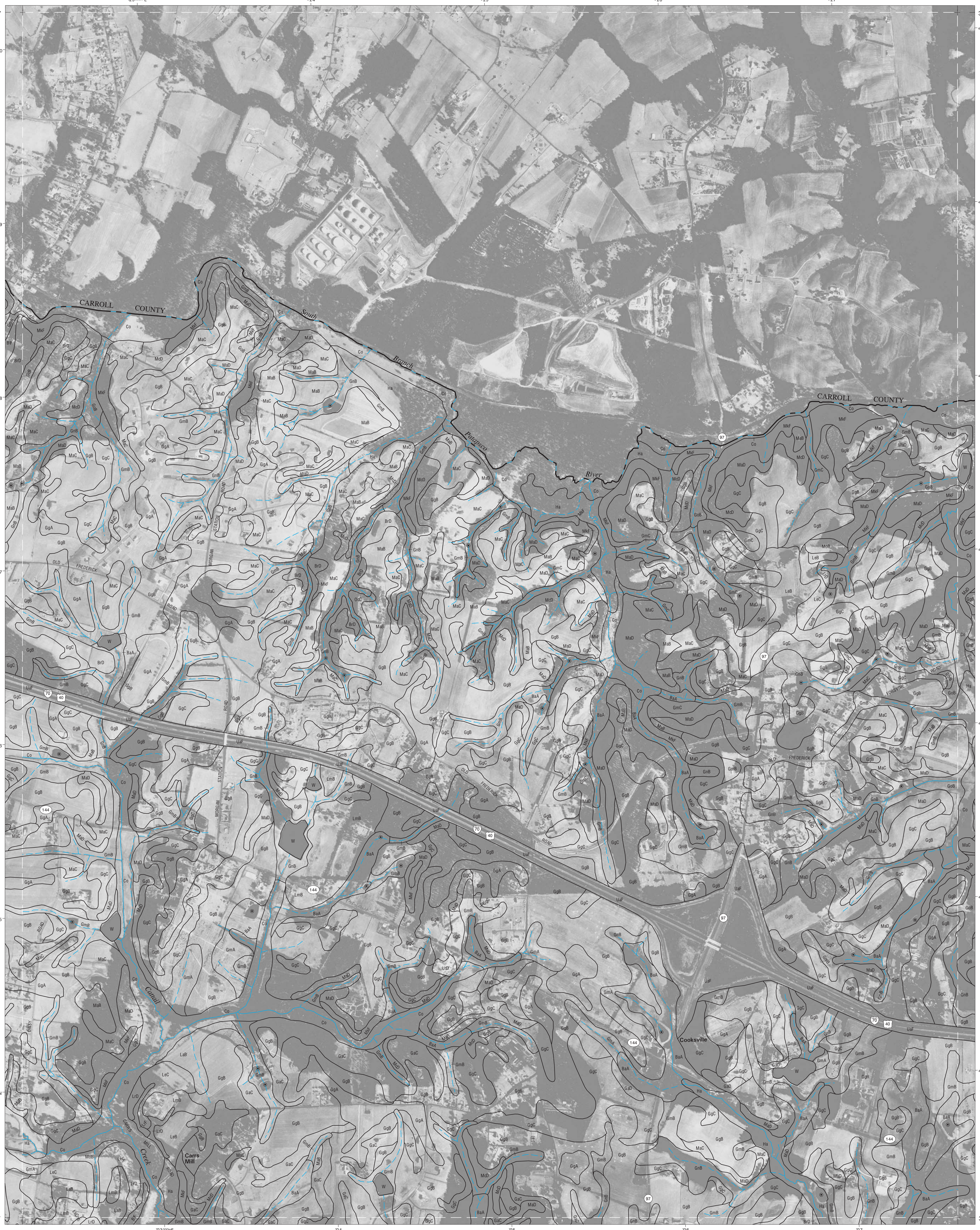
1 DAMASCUS NE
3 WOODBINE NE
8 DAMASCUS SE
9 WOODBINE SW
10 WOODBINE SE

INDEX TO ADJOINING 3.75 MAPS

WOODBINE NW, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 2 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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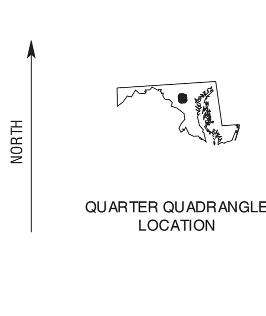

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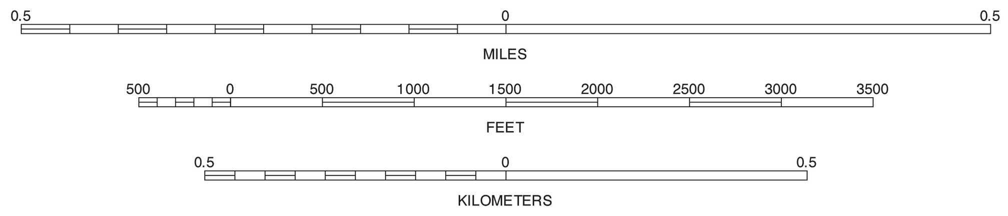
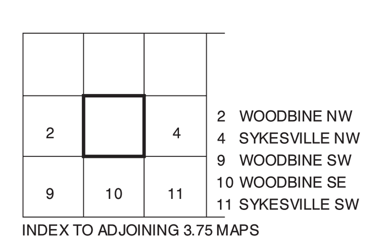


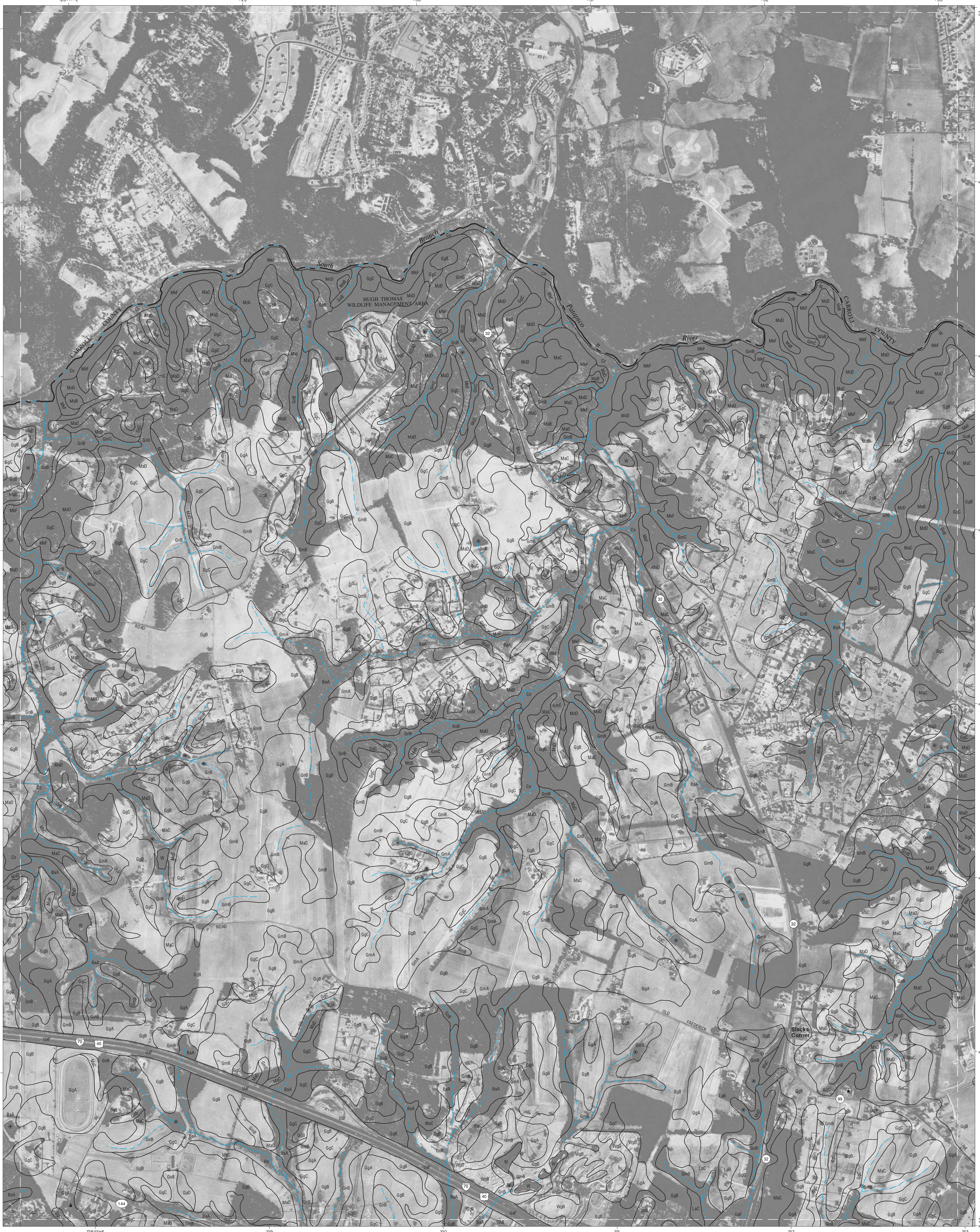


INDEX TO ADJOINING 3.75 MAPS

WOODBINE NE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 3 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



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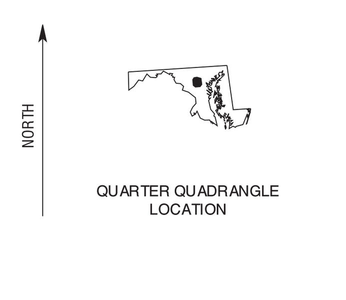
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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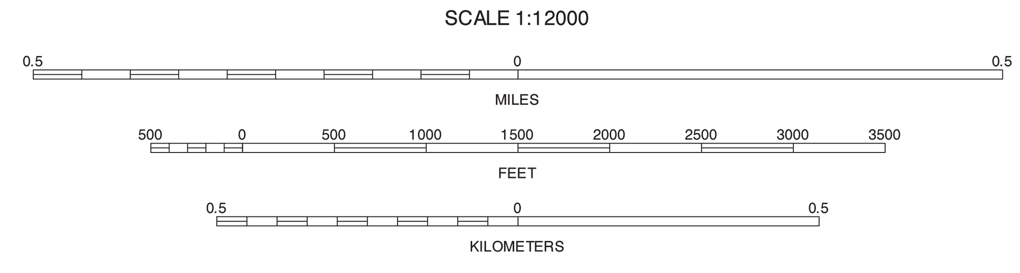
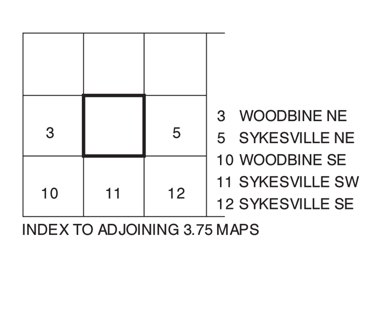




SYKESVILLE NW, MARYLAND

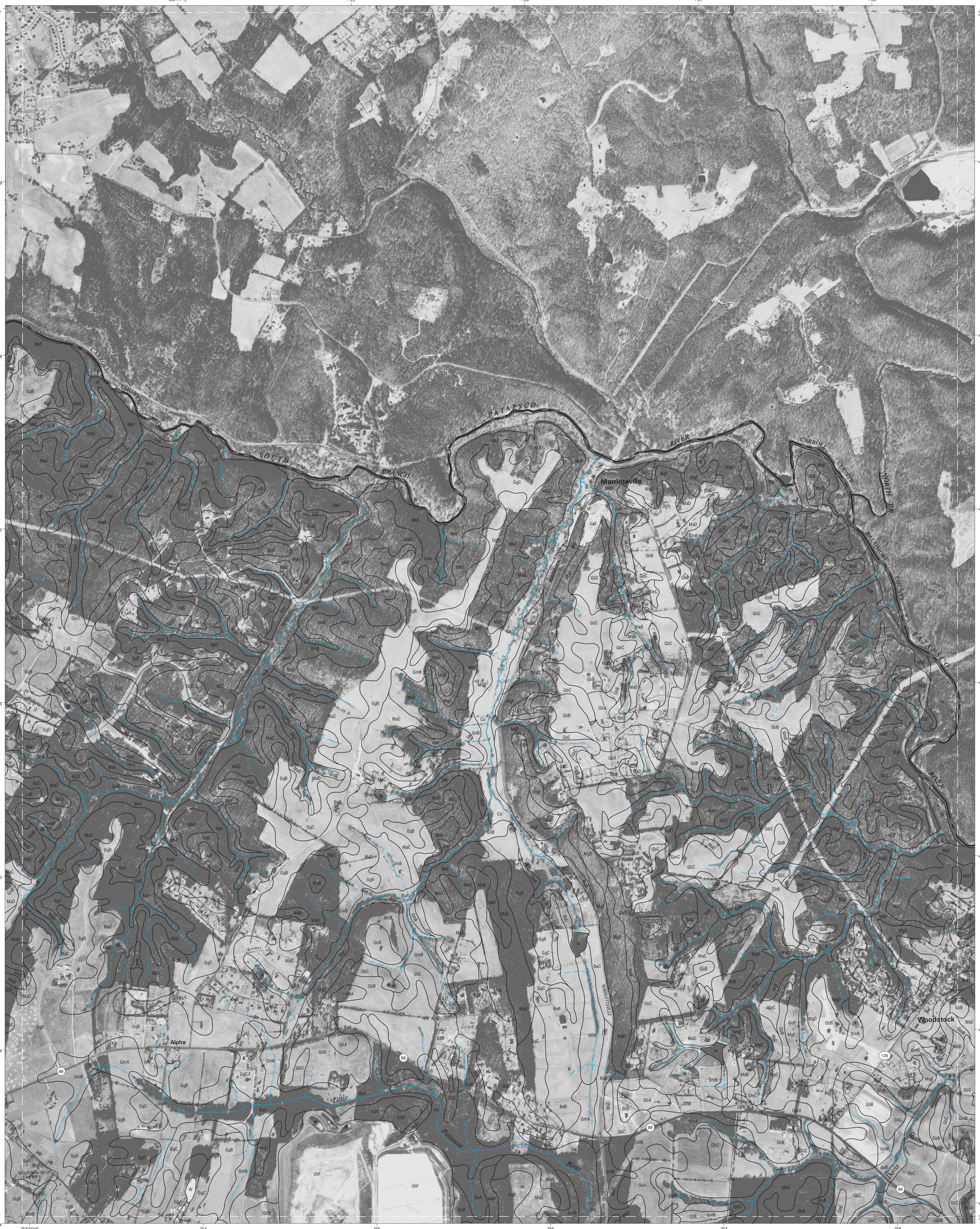
3.75 MINUTE SERIES

SHEET NUMBER 4 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

76° 56′15″ — 76° 52′30″
39° 22′30″ — 39°18′45″

Joins sheet 4, Sykesville NW



Joins sheet 6, Ellicott City NW

Joins sheet 11, Sykesville SW

Joins sheet 12, Sykesville SE

Joins sheet 13, Ellicott City SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

4		6
11	12	13

4 SYKESVILLE NW
6 ELLICOTT CITY NW
11 SYKESVILLE SW
12 SYKESVILLE SE
13 ELLICOTT CITY SW

INDEX TO ADJOINING 3.75 MAPS

SYKESVILLE NE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 5 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

76° 52′30″ — 76° 48′45″
39° 22′30″ — 39° 18′45″

Joins sheet 5, Sykesville NE

Joins sheet 7, Ellicott City NE

Joins sheet 12, Sykesville SE

Joins sheet 13, Ellicott City SW

Joins sheet 14, Ellicott City SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1988-1995 aerial photography. Hydrography and cultural features were acquired from NRCS and edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES 0.5 — 0 — 0.5

FEET 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS 0.5 — 0 — 0.5

5		7
12	13	14

5 SYKESVILLE NE
7 ELLICOTT CITY NE
12 SYKESVILLE SE
13 ELLICOTT CITY SW
14 ELLICOTT CITY SE

INDEX TO ADJOINING 3.75 MAPS

ELLICOTT CITY NW, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 6 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

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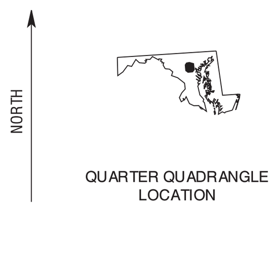
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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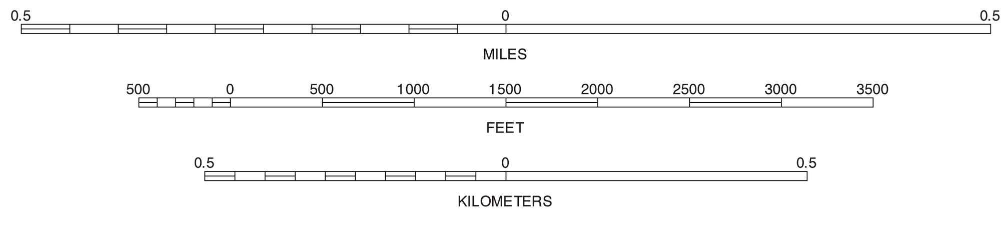
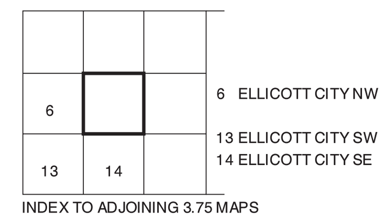




INDEX TO ADJOINING 3.75 MAPS

ELLICOTT CITY NE, MARYLAND

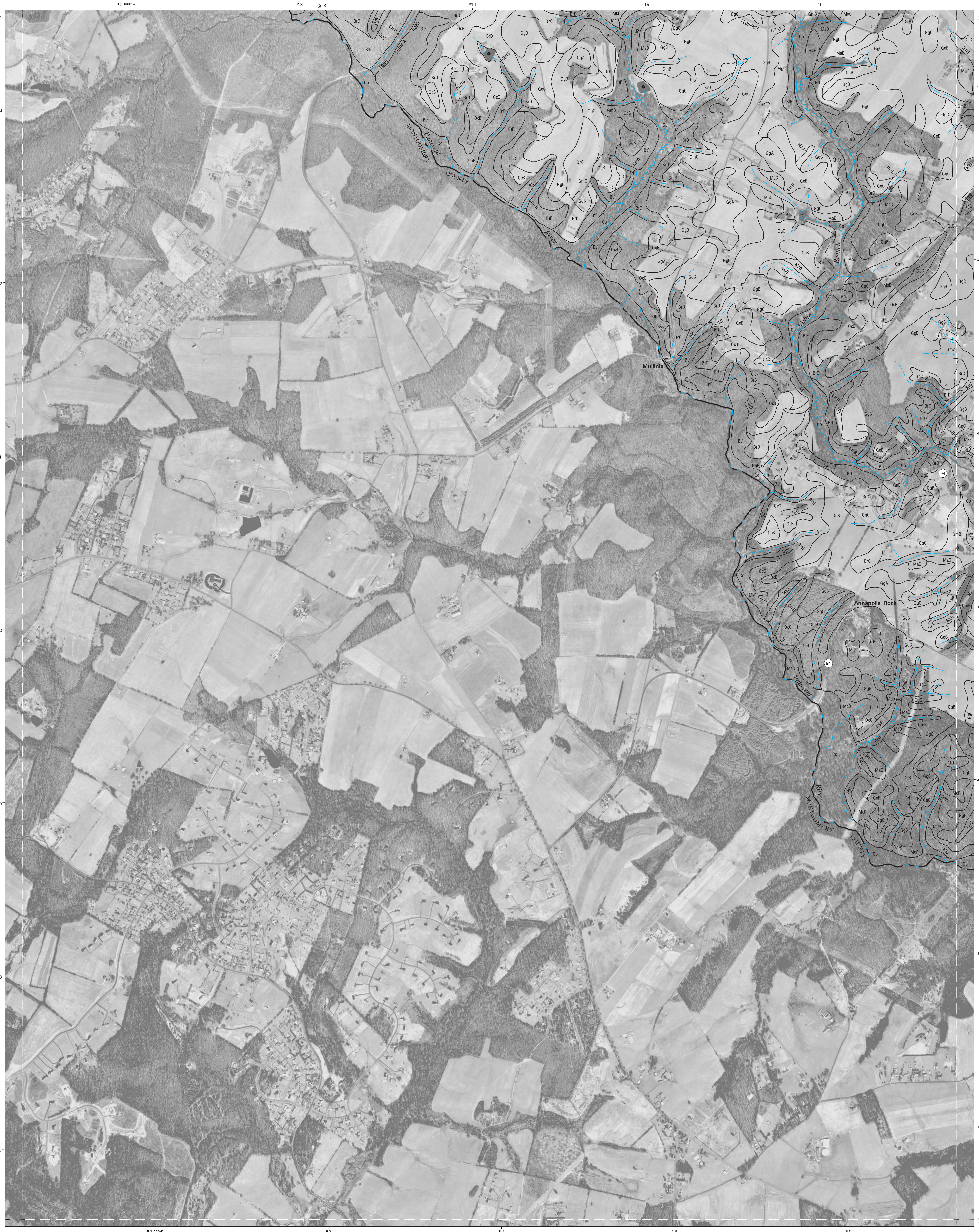
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 1, Damascus NE

Joins sheet 2, Woodbine NW



Joins sheet 9, Woodbine SW

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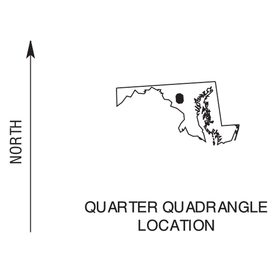
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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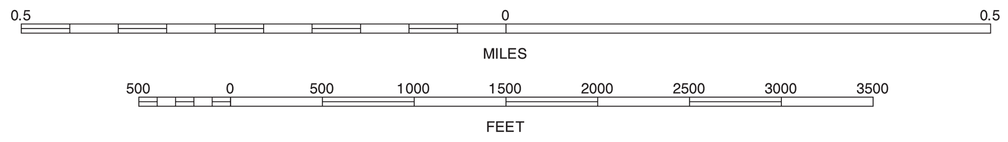

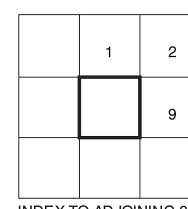

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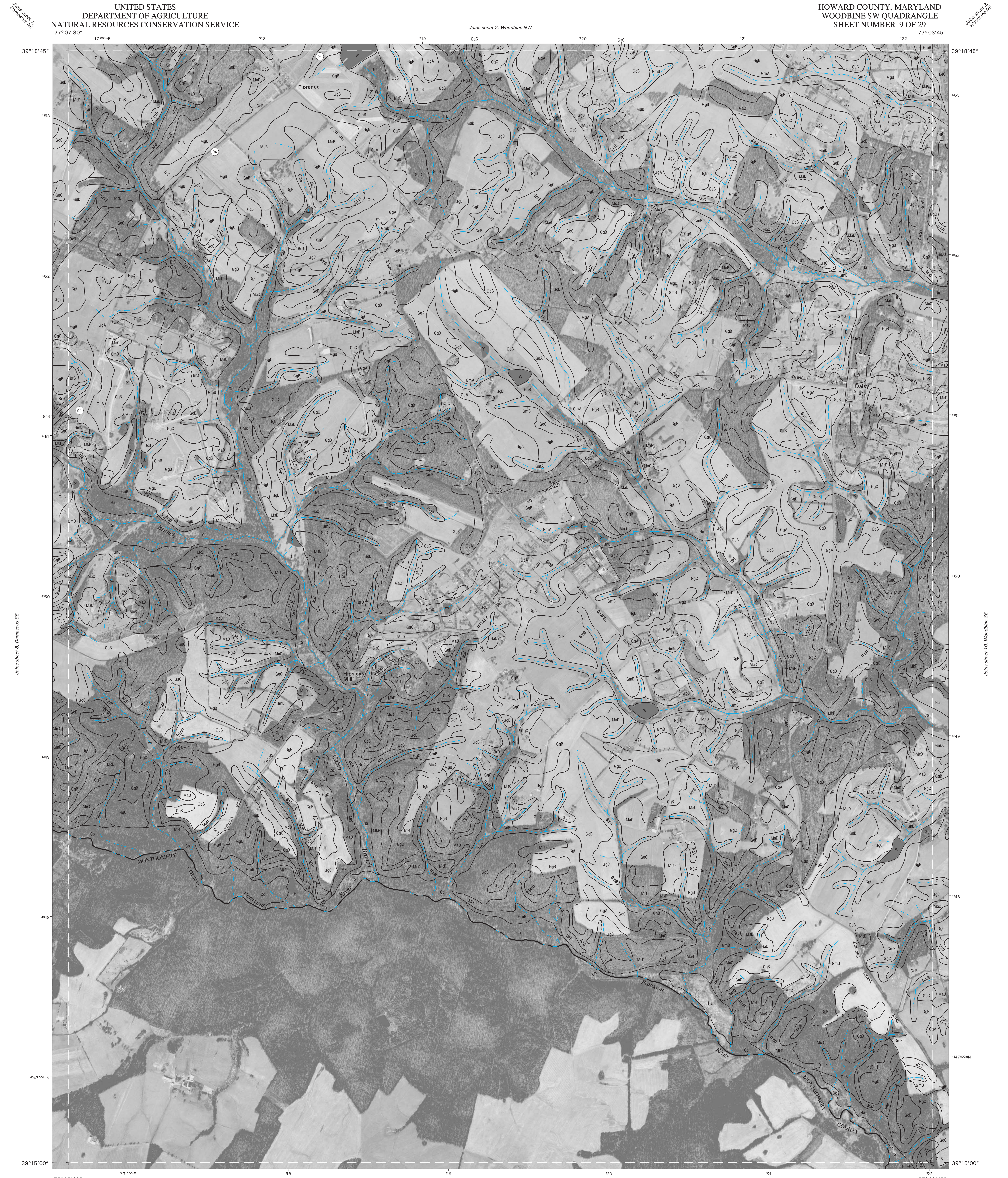
DAMASCUS SE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 8 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



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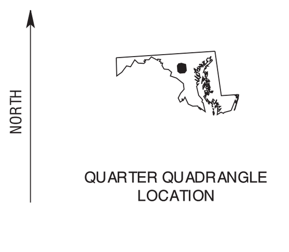
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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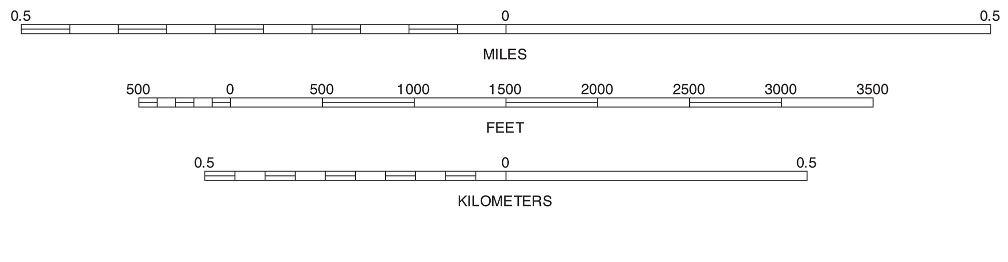

1	2	3	1 DAMASCUS NE 2 WOODBINE NW 3 WOODBINE NE
8		10	8 DAMASCUS SE 10 WOODBINE SE
		15	15 SANDY SPRING NE

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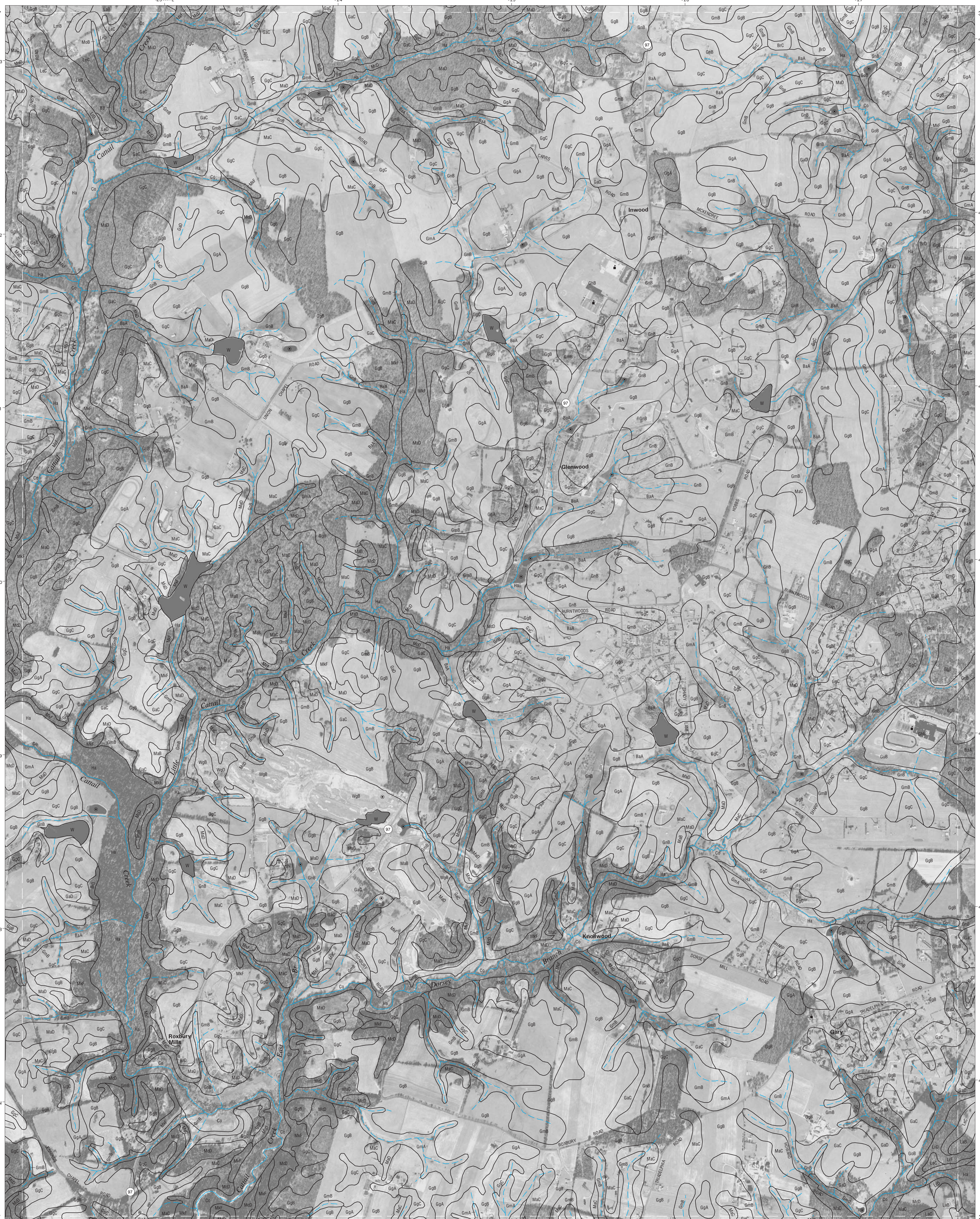
WOODBINE SW, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 9 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
WOODBINE SE QUADRANGLE
SHEET NUMBER 10 OF 29



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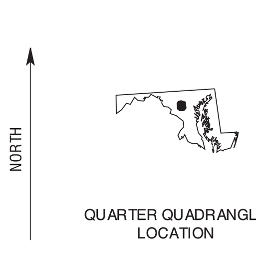
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



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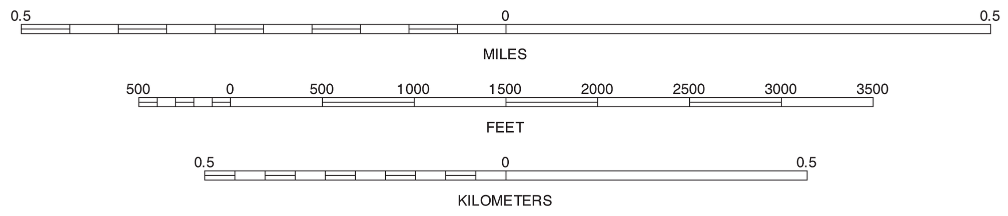

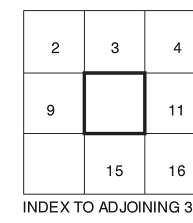

2 WOODBINE NW
3 WOODBINE NE
4 SYKESVILLE NW
9 WOODBINE SW
11 SYKESVILLE SW
15 SANDY SPRING NE
16 CLARKSVILLE NW

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WOODBINE SE, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 10 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
SYKESVILLE SW QUADRANGLE
SHEET NUMBER 11 OF 29

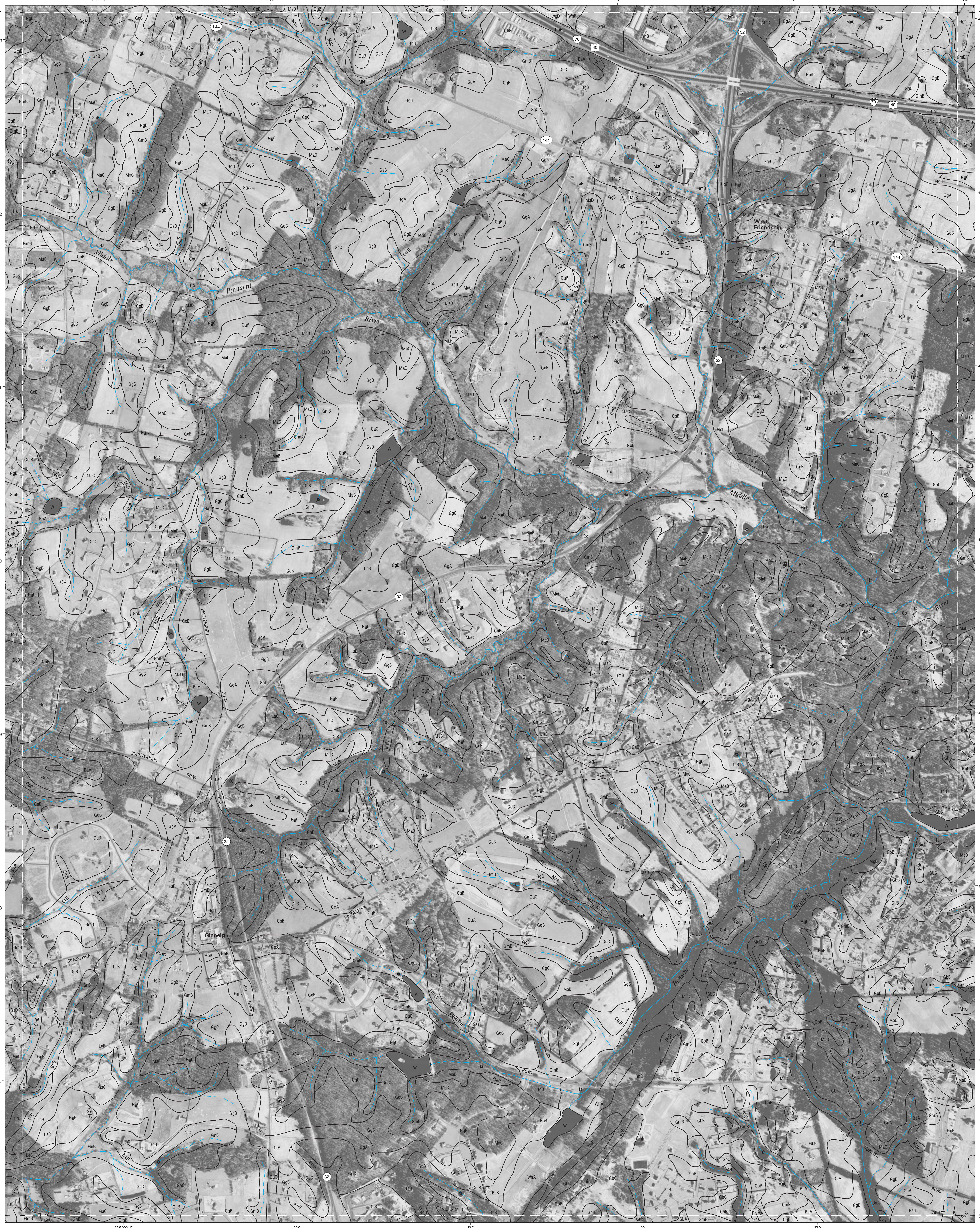
Joins sheet 3, Woodbine NE

Joins sheet 4, Sykesville NW

Joins sheet 5, Sykesville NE

77° 00′00″ | 76° 56′15″

39°18′45″



39°15′00″

77° 00′00″ | 76° 56′15″

Joins sheet 10, Woodbine SE

Joins sheet 12, Sykesville SE

Joins sheet 15, Sandy Spring NE

Joins sheet 16, Clarksville NW

Joins sheet 17, Clarksville NE

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

3	4	5
10		12
15	16	17

3 WOODBINE NE
4 SYKESVILLE NW
5 SYKESVILLE NE
10 WOODBINE SE
12 SYKESVILLE SE
15 SANDY SPRING NE
16 CLARKSVILLE NW
17 CLARKSVILLE NE

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SYKESVILLE SW, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 11 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

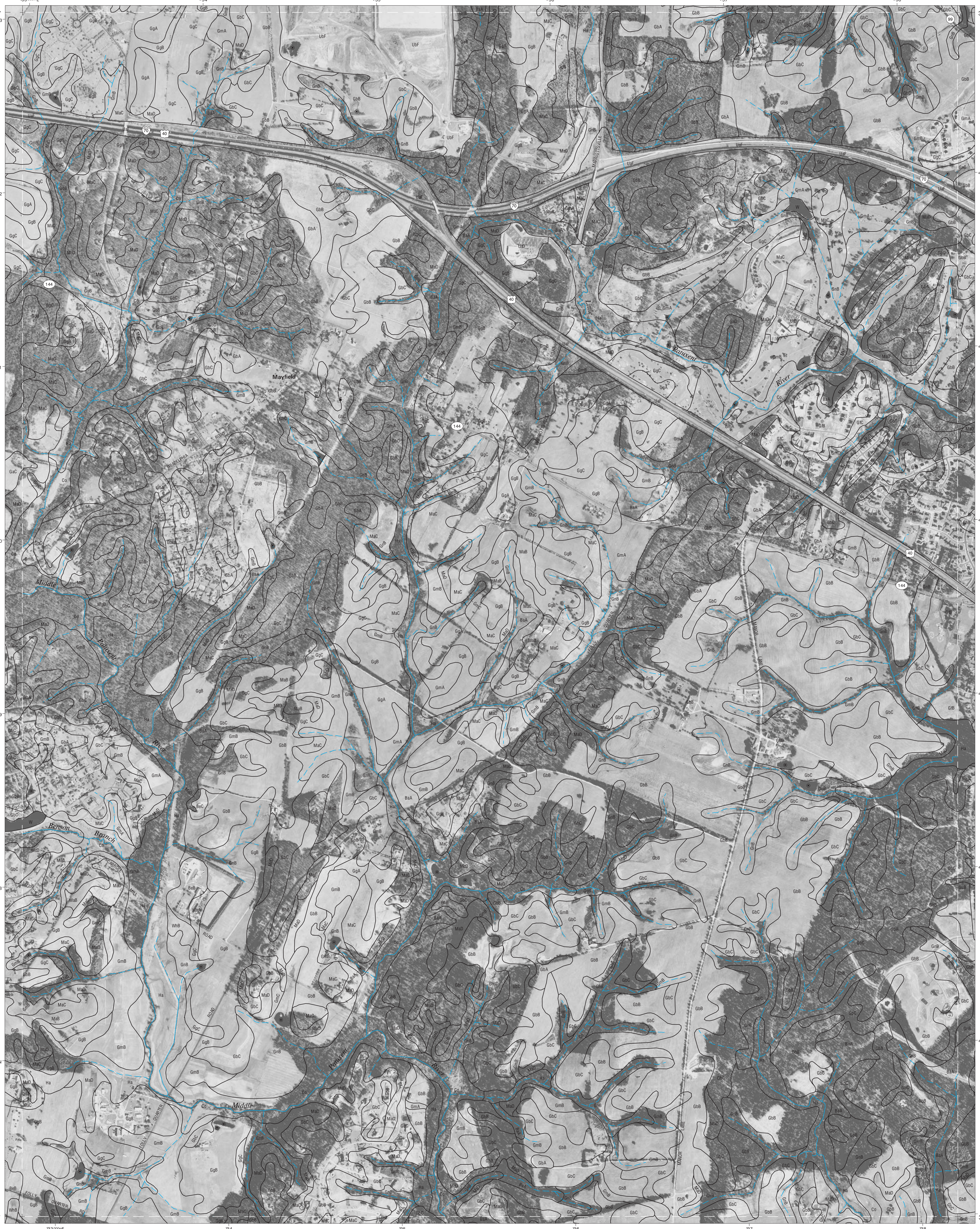
Joins sheet 4, Sykesville NW

Joins sheet 5, Sykesville NE

Joins sheet 6, Ellicott City NW

76° 56′15″ — 76° 52′30″

39°18′45″



Joins sheet 11, Sykesville SW

Joins sheet 13, Ellicott City SW

39°15′00″

76° 56′15″ — 76° 52′30″

Joins sheet 16, Clarksville NW

Joins sheet 17, Clarksville NE

Joins sheet 18, Savage NW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 18.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 — 0 — 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 — 0 — 0.5
KILOMETERS

4	5	6
11		13
16	17	18

4 SYKESVILLE NW
5 SYKESVILLE NE
6 ELLICOTT CITY NW
11 SYKESVILLE SW
13 ELLICOTT CITY SW
16 CLARKSVILLE NW
17 CLARKSVILLE NE
18 SAVAGE NW

INDEX TO ADJOINING 3.75 MAPS

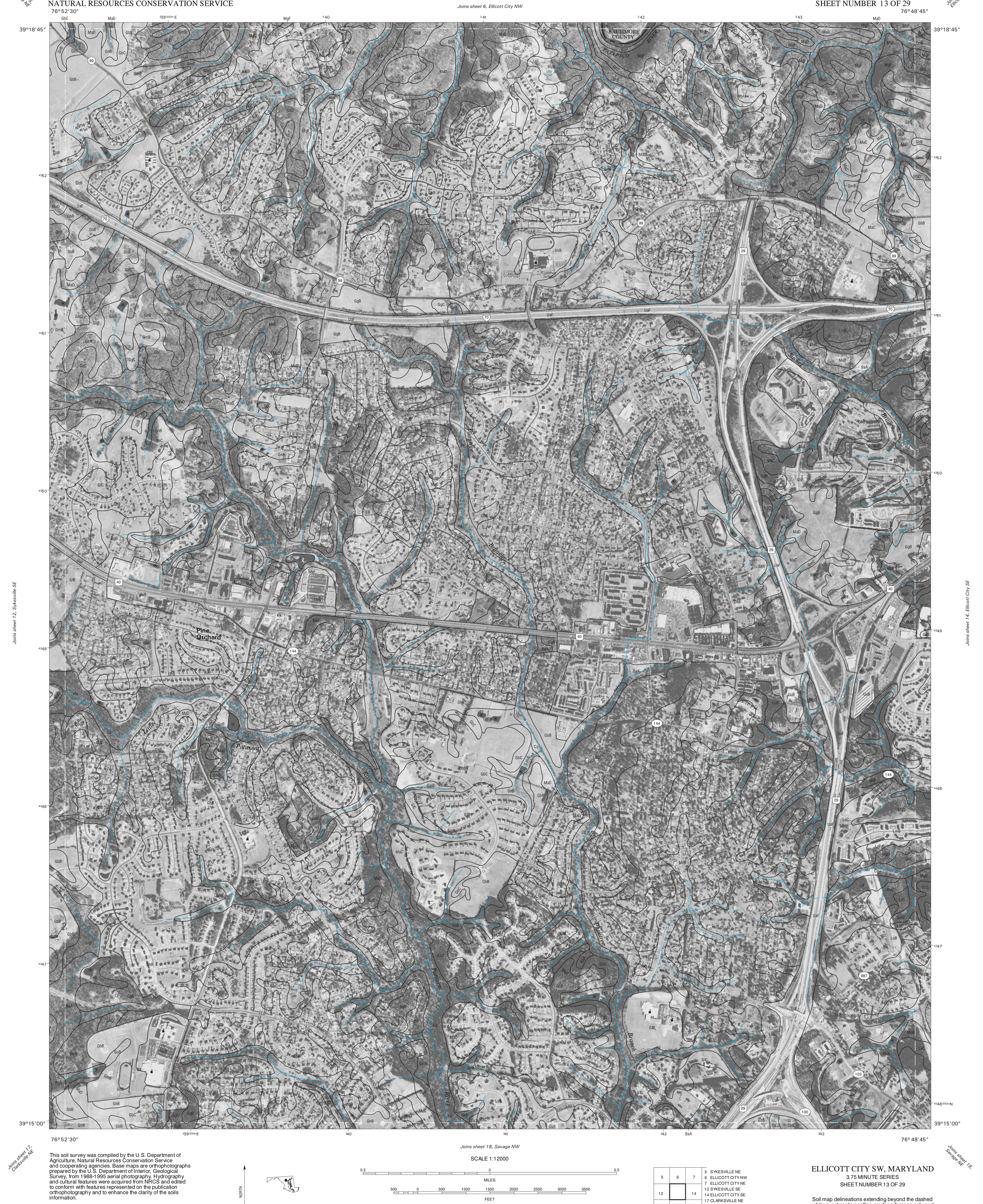
SYKESVILLE SE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 12 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
ELLICOTT CITY SW QUADRANGLE
SHEET NUMBER 13 OF 29



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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

5	6	7
12		14
17	18	19

5 SYKESVILLE NE
6 ELLICOTT CITY NW
7 ELLICOTT CITY NE
12 SYKESVILLE SE
14 ELLICOTT CITY SE
17 CLARKSVILLE NE
18 SAVAGE NW
19 SAVAGE NE

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ELLICOTT CITY SW, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 13 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Joins sheet 6, Ellicott City NW

Joins sheet 7, Ellicott City NE

76° 48′ 45″ — 76° 45′ 00″

39°18′45″ — 39°15′00″

Joins sheet 13, Ellicott City SW

Joins sheet 18, Savage NW

Joins sheet 19, Savage NE

Joins sheet 20, Relay NW

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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

6	7		6 ELLICOTT CITY NW 7 ELLICOTT CITY NE
13			13 ELLICOTT CITY SW
18	19	20	18 SAVAGE NW 19 SAVAGE NE 20 RELAY NW

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ELLICOTT CITY SE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 14 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 9, Woodbine SW

Joins sheet 10, Woodbine SE

Joins sheet 11, Sykesville SW

77° 03′45″ | 77° 00′00″

39°15′00″

Joins sheet 16, Clarksville NW

39°11′15″

77° 03′45″ | 77° 00′00″

Joins sheet 21, Sandy Spring SE

Joins sheet 22, Clarksville SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

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9 WOODBINE SW
10 WOODBINE SE
11 SYKESVILLE SW
16 CLARKSVILLE NW
21 SANDY SPRING SE
22 CLARKSVILLE SW

SANDY SPRING NE, (OVERSIZED) MARYLAND
3.75 MINUTE SERIES
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Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

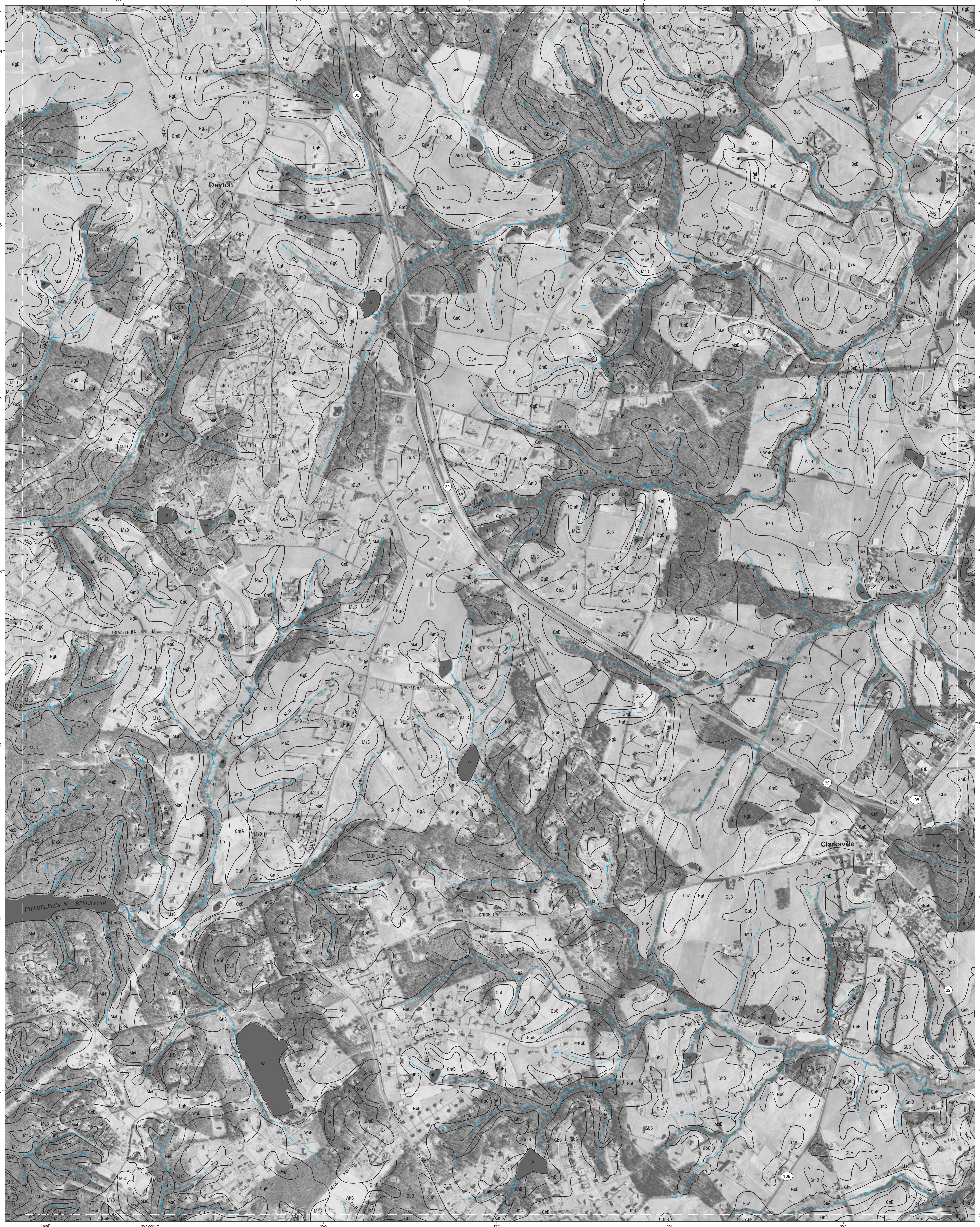
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
CLARKSVILLE NW QUADRANGLE
SHEET NUMBER 16 OF 29

Joins sheet 10, Woodbine SE

Joins sheet 11, Sykesville SW

Joins sheet 12, Sykesville SE



Joins sheet 15, Sandy Spring NE

Joins sheet 17, Clarksville NE

Joins sheet 21, Sandy Spring SE

Joins sheet 22, Clarksville SW

Joins sheet 23, Clarksville SE

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

10	11	12
15		17
21	22	23

10 WOODBINE SE
11 SYKESVILLE SW
12 SYKESVILLE SE
15 SANDY SPRING NE
17 CLARKSVILLE NE
21 SANDY SPRING SE
22 CLARKSVILLE SW
23 CLARKSVILLE SE

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CLARKSVILLE NW, MARYLAND

3.75 MINUTE SERIES
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Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 11, Sykesville SW

UNITED STATES
DEPARTMENT OF AGRICULTURE
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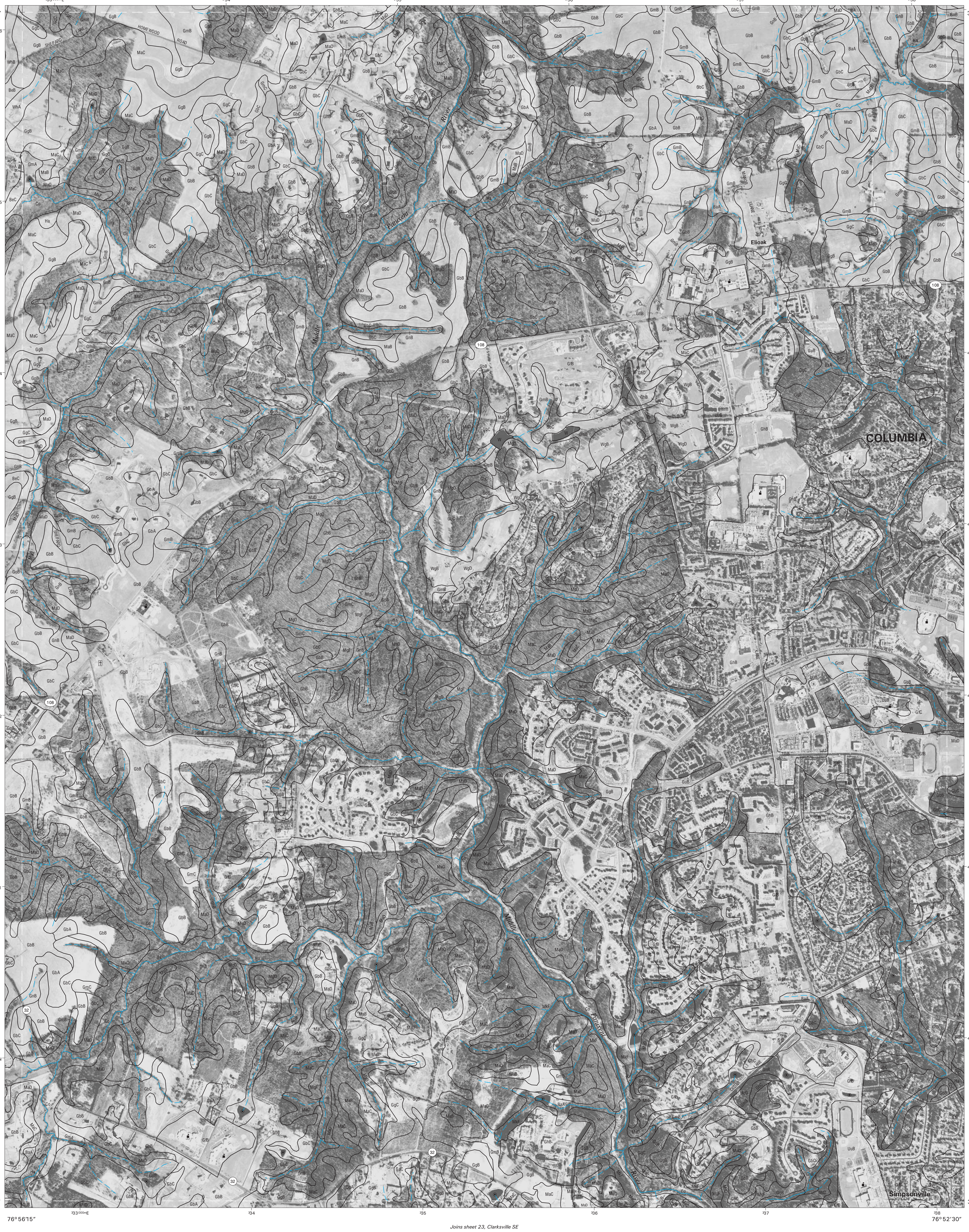
HOWARD COUNTY, MARYLAND
CLARKSVILLE NE QUADRANGLE
SHEET NUMBER 17 OF 29

Joins sheet 13, Ellicott City SW

Joins sheet 12, Sykesville SE



Joins sheet 16, Clarksville NW

Joins sheet 18, Savage NW

Joins sheet 22, Clarksville SW

Joins sheet 23, Clarksville SE

Joins sheet 24, Savage SW

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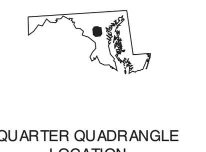
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH



QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

11	12	13
16		18
22	23	24

11 SYKESVILLE SW
12 SYKESVILLE SE
13 ELLICOTT CITY SW
16 CLARKSVILLE NW
18 SAVAGE NW
22 CLARKSVILLE SW
23 CLARKSVILLE SE
24 SAVAGE SW

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CLARKSVILLE NE, MARYLAND

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SHEET NUMBER 17 OF 29

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
SAVAGE NW QUADRANGLE
SHEET NUMBER 18 OF 29

Joins sheet 12, Sykesville SE

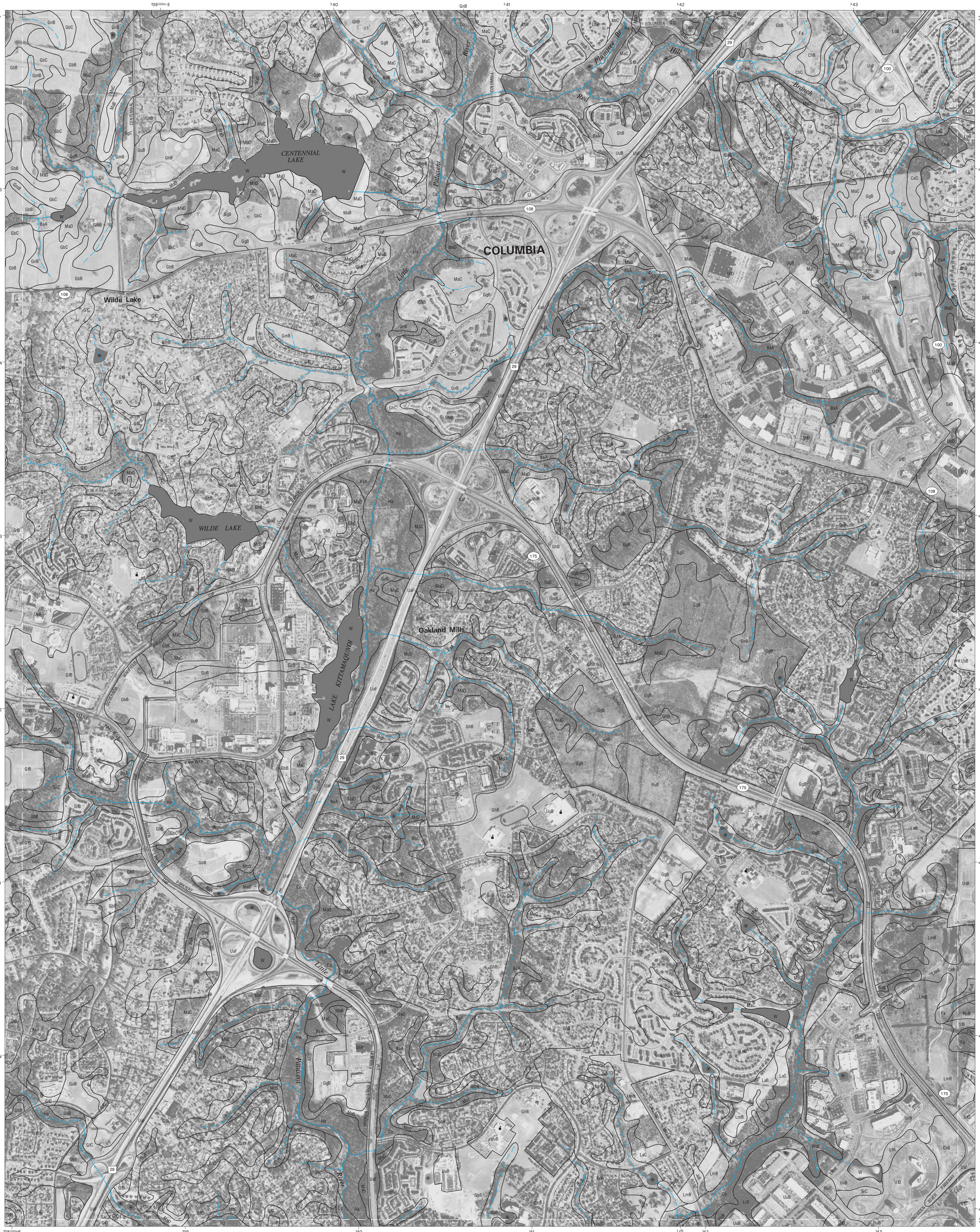
Joins sheet 13, Ellicott City SW

Joins sheet 14, Ellicott City SE

Joins sheet 17, Clarksville NE

Joins sheet 19, Savage NE

76° 52′30″ · 76° 48′45″ · 39°15′00″ · 39°11′15″



Joins sheet 23, Clarksville SE

Joins sheet 24, Savage SW

Joins sheet 25, Savage SE

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 — 0 — 0.5 MILES

500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500 FEET

0.5 — 0 — 0.5 KILOMETERS

12	13	14
17		19
23	24	25

12 SYKESVILLE SE
13 ELLICOTT CITY SW
14 ELLICOTT CITY SE
17 CLARKSVILLE NE
19 SAVAGE NE
23 CLARKSVILLE SE
24 SAVAGE SW
25 SAVAGE SE

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SAVAGE NW, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 18 OF 29

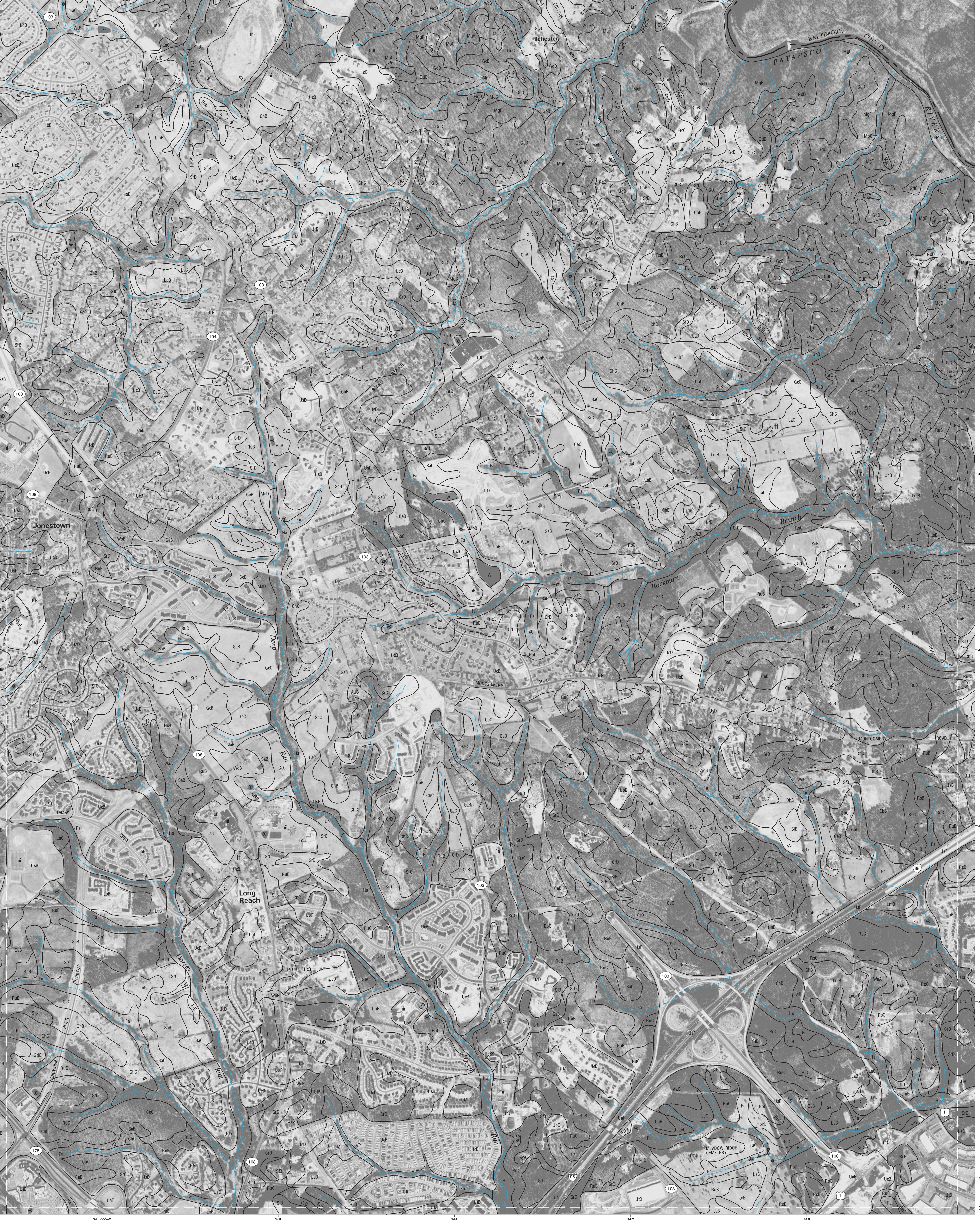
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 13, Ellicott City SW

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
SAVAGE NE QUADRANGLE
SHEET NUMBER 19 OF 29

Joins sheet 14, Ellicott City SE



Joins sheet 18, Savage NW

Joins sheet 20, Relay NW

Joins sheet 24, Savage SW

Joins sheet 25, Savage SE

Joins sheet 26, Relay SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

13	14	
18		20
24	25	26

13 ELLICOTT CITY SW
14 ELLICOTT CITY SE
18 SAVAGE NW
20 RELAY NW
24 SAVAGE SW
25 SAVAGE SE
26 RELAY SW

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SAVAGE NE, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 19 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 14, Ellicott City SE

76° 45′00″ — 76° 41′15″

39°15′00″

Joins sheet 19, Savage NE

39°11′15″

76° 45′00″ — 76° 41′15″

Joins sheet 25, Savage SE

Joins sheet 26, Relay SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

14		
19	■	
25	26	

14 ELLICOTT CITY SE
19 SAVAGE NE
25 SAVAGE SE
26 RELAY SW

INDEX TO ADJOINING 3.75 MAPS

RELAY NW, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 20 OF 29

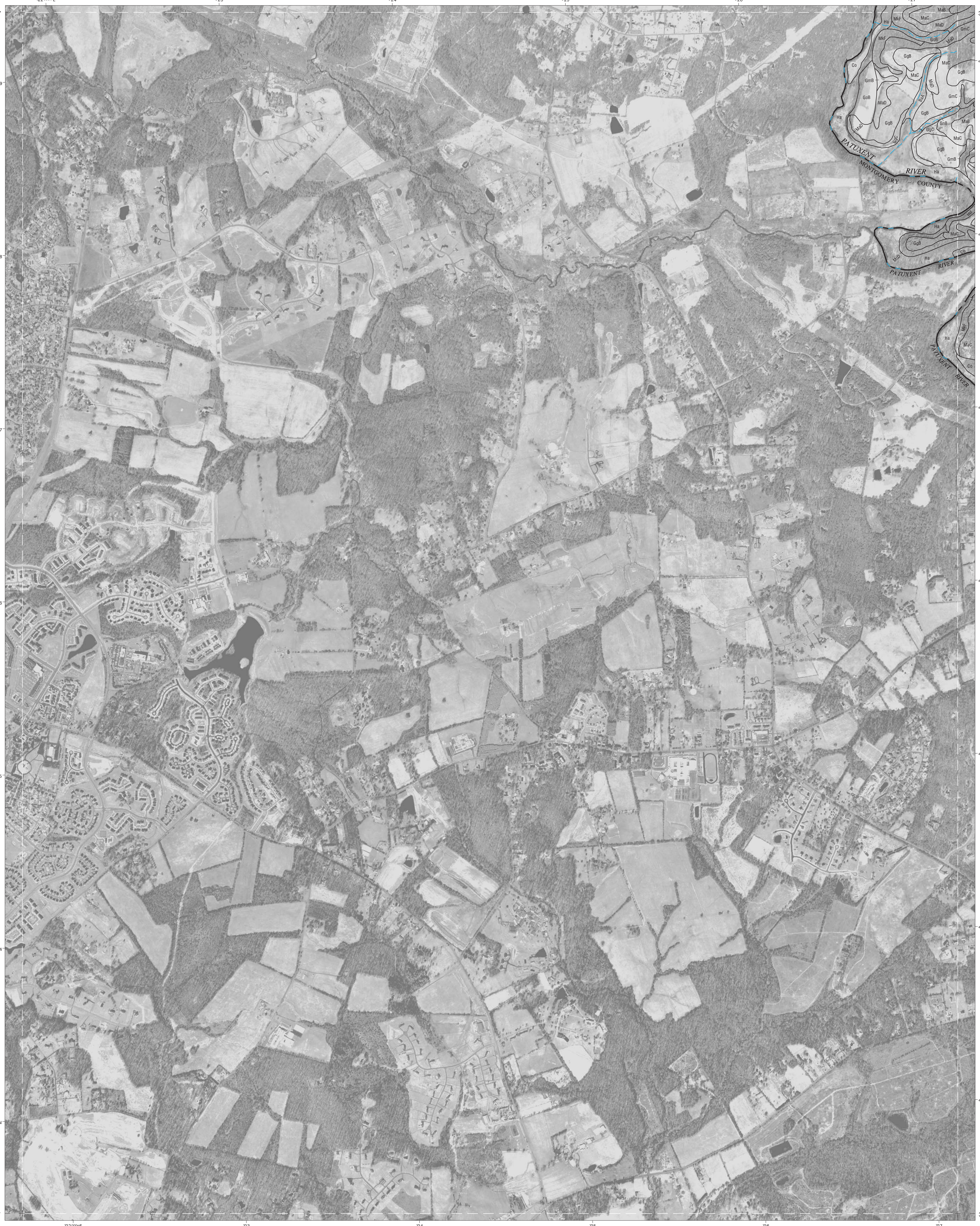
Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
SANDY SPRING SE QUADRANGLE
SHEET NUMBER 21 OF 29

Joins sheet 15, Sandy Spring NE

Joins sheet 16, Clarksville NW



Joins sheet 22, Clarksville SW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

	15	16
	■	22

15 SANDY SPRING NE
16 CLARKSVILLE NW
22 CLARKSVILLE SW

INDEX TO ADJOINING 3.75 MAPS

SANDY SPRING SE, MARYLAND

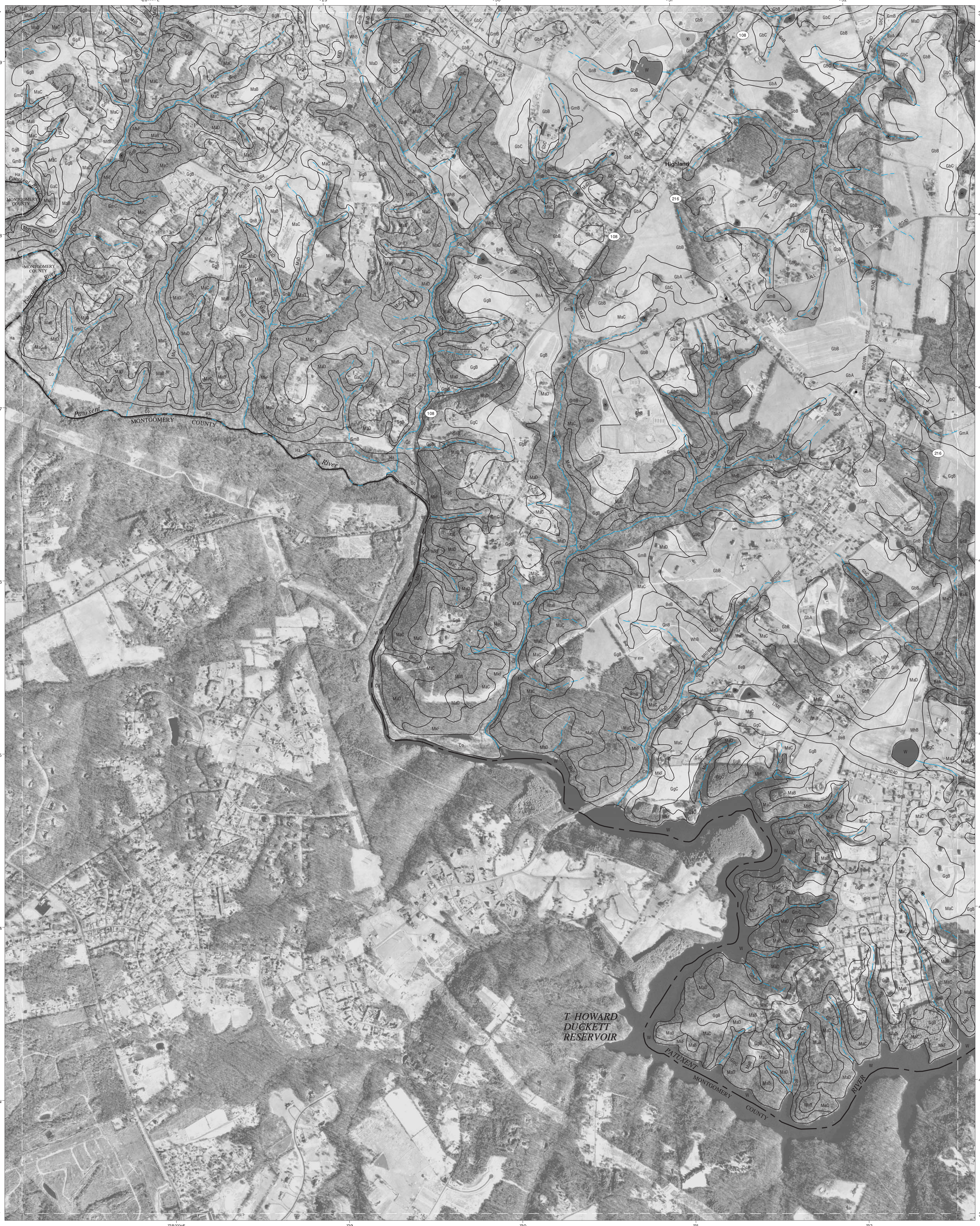
3.75 MINUTE SERIES
SHEET NUMBER 21 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
CLARKSVILLE SW QUADRANGLE
SHEET NUMBER 22 OF 29

Joins sheet 15, Sandy Spring NE
Joins sheet 16, Clarksville NW
Joins sheet 17, Clarksville NE
Joins sheet 21, Sandy Spring SE
Joins sheet 23, Clarksville SE
Joins sheet 27, Beltsville NE



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NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

15	16	17
21		23
		27

15 SANDY SPRING NE
16 CLARKSVILLE NW
17 CLARKSVILLE NE
21 SANDY SPRING SE
23 CLARKSVILLE SE
27 BELTSVILLE NE

INDEX TO ADJOINING 3.75 MAPS

CLARKSVILLE SW, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 29

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
CLARKSVILLE SE QUADRANGLE
SHEET NUMBER 23 OF 29

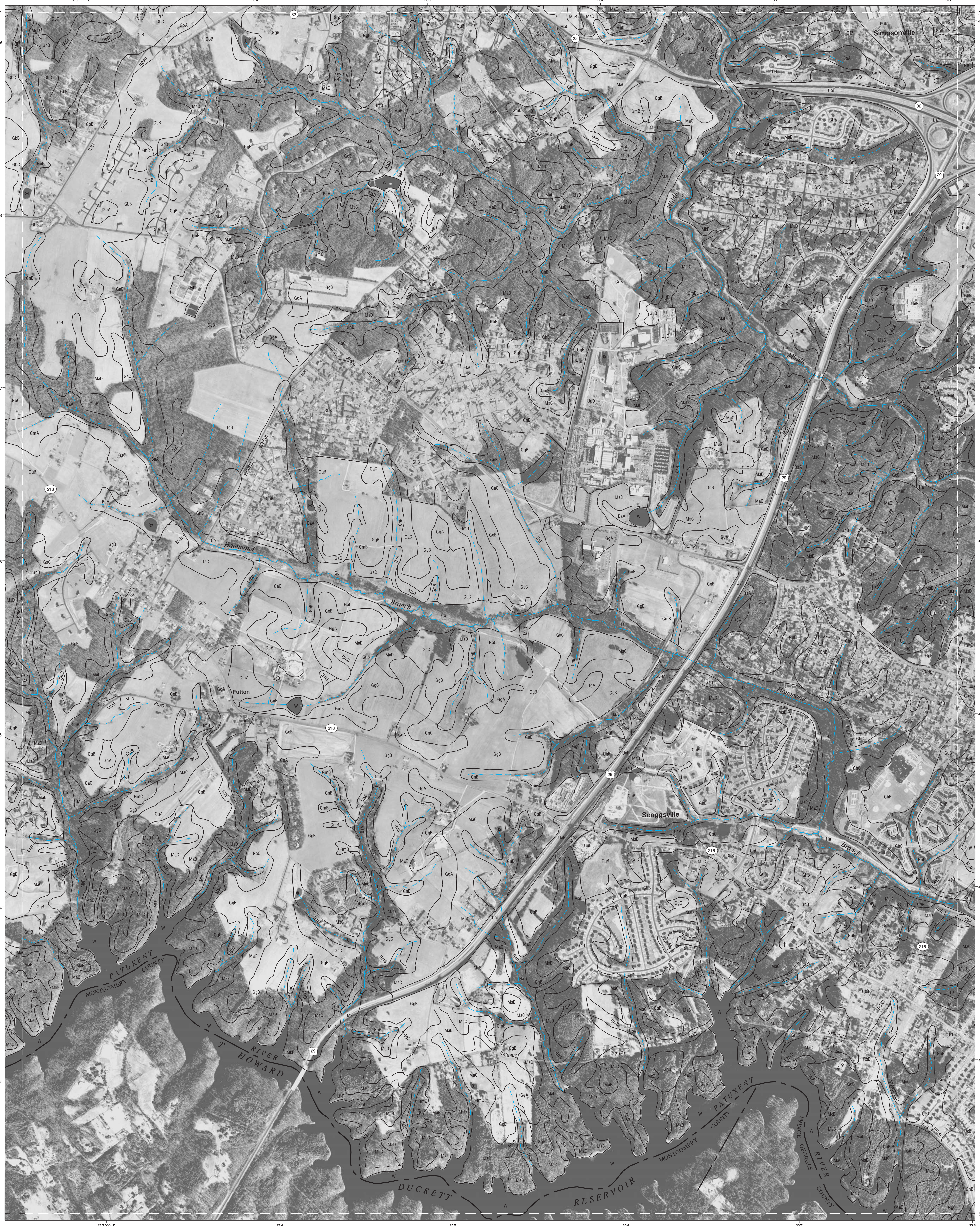
Joins sheet 16, Clarksville NW

Joins sheet 17, Clarksville NE

Joins sheet 18, Savage NW

76° 56′15″ — 76° 52′30″

39°11′15″ — 39°07′30″



Joins sheet 22, Clarksville SW

Joins sheet 24, Savage SW

Joins sheet 27, Beltsville NE

Joins sheet 28, Laurel NW

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 — 0 — 0.5

FEET: 500 — 0 — 500 — 1000 — 1500 — 2000 — 2500 — 3000 — 3500

KILOMETERS: 0.5 — 0 — 0.5

16	17	18
22		24
	27	28

16 CLARKSVILLE NW
17 CLARKSVILLE NE
18 SAVAGE NW
22 CLARKSVILLE SW
24 SAVAGE SW
27 BELTSVILLE NE
28 LAUREL NW

INDEX TO ADJOINING 3.75 MAPS

CLARKSVILLE SE, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 23 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5 MILES

500 0 500 1000 1500 2000 2500 3000 3500 FEET

0.5 0 0.5 KILOMETERS

17	18	19
23		25
27	28	29

17 CLARKSVILLE NE
18 SAVAGE NW
19 SAVAGE NE
23 CLARKSVILLE SE
25 SAVAGE SE
27 BELTSVILLE NE
28 LAUREL NW
29 LAUREL NE

INDEX TO ADJOINING 3.75 MAPS

SAVAGE SW, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 24 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
SAVAGE SE QUADRANGLE
SHEET NUMBER 25 OF 29

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES

FEET

KILOMETERS

18	19	20
24		26
28	29	

18 SAVAGE NW
19 SAVAGE NE
20 RELAY NW
24 SAVAGE SW
26 RELAY SW
28 LAUREL NW
29 LAUREL NE

INDEX TO ADJOINING 3.75 MAPS

SAVAGE SE, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
RELAY SW QUADRANGLE
SHEET NUMBER 26 OF 29

Joins sheet 19, Savage NE

Joins sheet 20, Relay NW

76° 45′00″ 39°11′15″ 76° 41′15″

Joins sheet 25, Savage SE

Joins sheet 29, Laurel NE

39° 07′30″ 76° 45′00″ 76° 41′15″

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

MILES: 0.5 0 0.5

FEET: 500 0 500 1000 1500 2000 2500 3000 3500

KILOMETERS: 0.5 0 0.5

19	20	
25		
29		

19 SAVAGE NE
20 RELAY NW
25 SAVAGE SE
29 LAUREL NE

INDEX TO ADJOINING 3.75 MAPS

RELAY SW, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 26 OF 29

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UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

HOWARD COUNTY, MARYLAND
BELTSVILLE NE QUADRANGLE
SHEET NUMBER 27 OF 29

Joins sheet 23, Clarksville SE

Joins sheet 28, Laurel NW

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of Interior, Geological Survey, from 1988-1995 aerial photography. Hydrography and cultural features were acquired from NRCS and edited to conform with features represented on the publication orthophotography and to enhance the clarity of the soils information.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

22	23	24
		28

22 CLARKSVILLE SW
23 CLARKSVILLE SE
24 SAVAGE SW
28 LAUREL NW

INDEX TO ADJOINING 3.75 MAPS

BELTSVILLE NE, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 27 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 23, Clarksville SE
Joins sheet 24, Savage SW
Joins sheet 25, Savage SE
Joins sheet 27, Beltsville NE
Joins sheet 29, Laurel NE

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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 18. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

23	24	25
27		29

23 CLARKSVILLE SE
24 SAVAGE SW
25 SAVAGE SE
27 BELTSVILLE NE
29 LAUREL NE

INDEX TO ADJOINING 3.75 MAPS

LAUREL NW, MARYLAND

3.75 MINUTE SERIES
SHEET NUMBER 28 OF 29

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 24, Savage SW

Joins sheet 25, Savage SE

Joins sheet 26, Relay SW

Joins sheet 28, Laurel NW

76° 48′ 45″ 39° 07′ 30″ 76° 45′ 00″ 39° 07′ 30″

39° 03′ 45″ 76° 48′ 45″ 344000mE 345 346 347 348 76° 45′ 00″ 4325000mN 39° 03′ 45″

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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 18.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUARTER QUADRANGLE LOCATION

SCALE 1:12000

0.5 0 0.5
MILES

500 0 500 1000 1500 2000 2500 3000 3500
FEET

0.5 0 0.5
KILOMETERS

24	25	26
28		

24 SAVAGE SW
25 SAVAGE SE
26 RELAY SW
28 LAUREL NW

INDEX TO ADJOINING 3.75 MAPS

LAUREL NE, MARYLAND
3.75 MINUTE SERIES
SHEET NUMBER 29 OF 29

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